

Medical Mnemonics

A politically correct, non-inclusive approach
to remembering things you might
otherwise forget in med school

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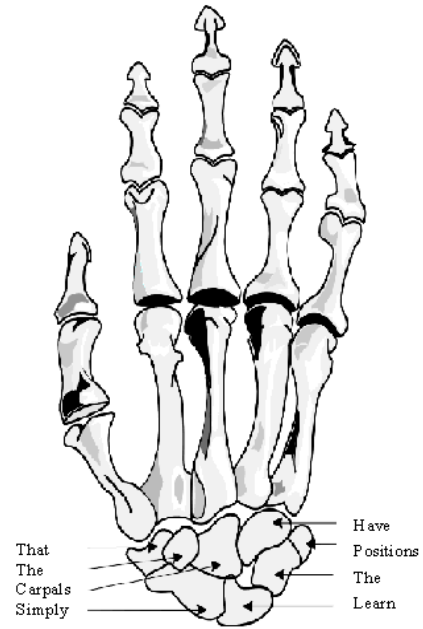
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ANATOMY

Carpal Bones of the Hand:

Simply Learn The Positions That The Carpals Have

Scaphoid
Lunate
Triquetrum
Pisiform
Trapezium
Trapezoid,
Capitate
Hamate

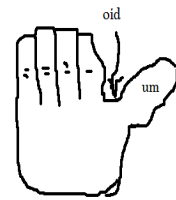


Carpal bones: trapezium vs. trapezoid location .

Since there's two T's in carpal bone mnemonic sentences,
need to know which T is where:

Trapezi**UM** is by the th**UMB**, Trapezi**OID** is in**SIDE**.

---Tom Ball



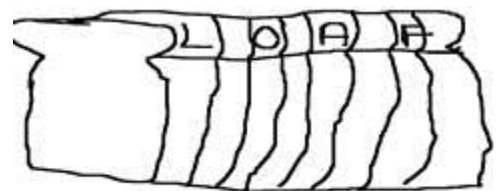
Median Nerve Supply to the Hand: LOAF

Lumbricals of digits 1 and 2

Opponens

Abductor pollicis brevis

Flexor pollicis



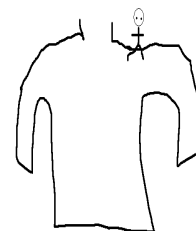
Rotator Cuff Tendons: SITS

Suprapinatus

Infraspinatus

Teres minor

Subscapularis

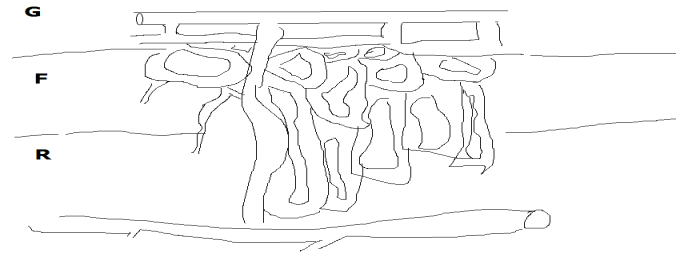


Adrenal Cortex, Three Zones of: GFR

Zona **G**lomerulosa (produces mineralocorticoids)

Zona **F**asciculata (produces glucocorticoids)

Zona **R**eticularis (produces androgens)



Systems review: systems checklist: I PUNCH EAR

Integumental

Pulmonary

Urogenital

Nervous

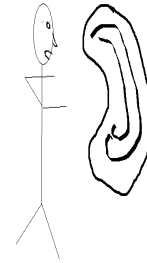
Cardiovascular

Hematolymphoid

Endocrine

Alimentary

Reproductive



--- Beth Ann Young and Robert O'Connor

Femoral triangle: arrangement of contents: NAVEL

From lateral hip towards medial **n**avel:

Nerve (directly behind sheath)

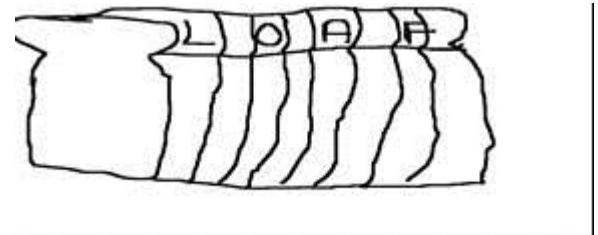
Artery (within sheath)

Vein (within sheath)

Empy space (between vein and lymph)

Lymphatics (with deep inguinal node)

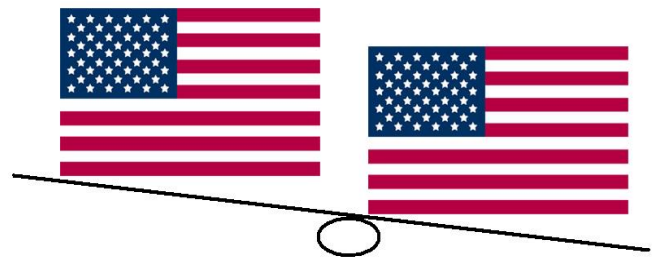
Nerve/Artery/Vein are all called Femoral.



--- Andrew J. Vasil

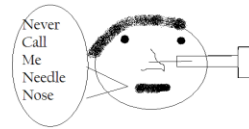
Balance organs

Utricule and **S**accule keep **US** balanced.



Nasal Cavity: Never Call Me Needle Nose

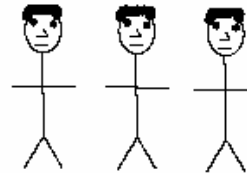
- Nares (external)
- Conchae
- Meatuses
- Nares (internal)
- Nasopharynx.



Three Tonsils

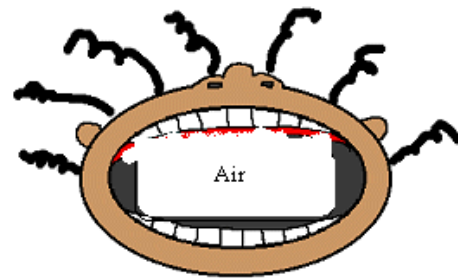
People (or **PPL**, for short) have three tonsils:

- Pharyngeal
- Palatine
- Lingual.



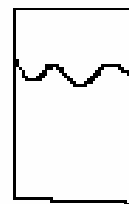
Airflow Passages: Mouthy People are Loud Talkers

- Mouth
- Pharynx
- Larynx
- Trachea



Scalp nerve supply: GLASS

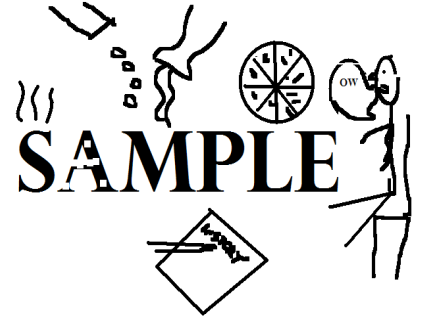
- Greater occipital/ Greater auricular
- Lesser occipital
- Auriculotemporal
- Supratrochlear
- Supraorbital



ANESTHESIA

Six Questions to ask a conscious patient or his/her relative in a life-threatening emergency prior to taking him/her to the operating room: SAMPLE?

- Smoking history?
- Allergies to medications or previous anesthetics?
- Medications or alcohol use?
- Past medical history?
- Last meal?
- Events leading up to present injury or collapse?



Maintenance Intravenous Fluids in the Adult or Child: 4, 2, 1

- 4 mL/kg/hr for the first 10 kg
- 2 mL/kg/hr for the next 10 kg
- 1 mL/kg/hr for each remaining kg

Eg: A 37 kg adolescent requires $(4 \times 10) + (2 \times 10) + (1 \times 17) = 77$ mL/hr IV fluid

CARDIOLOGY

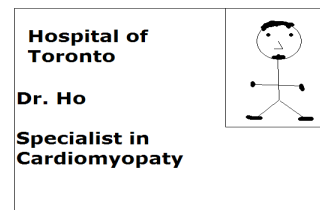
Bradycardia, causes: STAGeRD J

Sick sinus syndrome
Thyroid (ie, hypothyroidism)
Athletic heart
Gastrointestinal mesenteric traction
Rest/sleep
Drugs (eg, beta-blockers, digitalis)
Jaundice

S
T
A
G
R
D
J

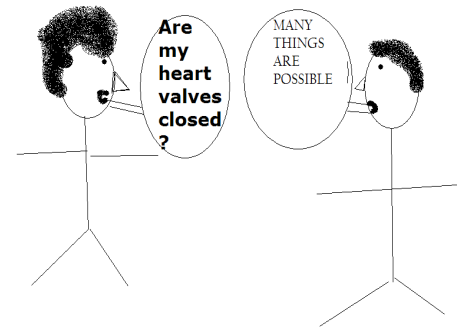
Cardiomyopathy, Classification: DR. HO

Dilated
Restrictive
Hypertrophic
Obliterative



Heart Sounds, Corresponding Order of Valve Closure: "Many Things Are Possible"

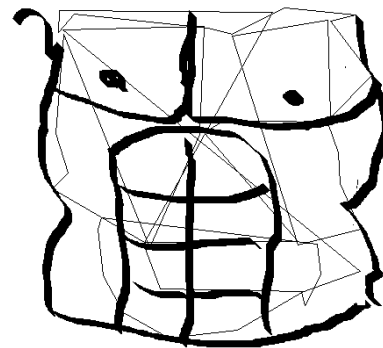
Mitral valve closure = 1st part of 1st heart sound = A1
Tricuspid valve closure = 2nd part of 1st heart sound = A2
Aortic valve closure = 1st part of 2nd heart sound = P2
Pulmonic valve closure = 2nd part of 2nd heart sound = P2



Chest Pain, Acute, Causes: CHEST MAPPED

Cardiac anoxia (ie, ischemia or infarction)
Hematological (e.g., sickle cell chest crisis)
Esophagus (ie, spasm, esophagitis, rupture)
Spinal (ie, nerve root damage, spinal column disease)
Trachea or bronchus

Mediastinum: infection or mediastinal emphysema
Aorta: Dissection or aneurysm
Parietal surfaces (ie, pleural, pericardial, diaphragm)
Pulmonary embolus
Pneumonia
Extra-thoracic organs (eg, stomach, gallbladder, liver, pancreas)
Diseases of viral origin (eg, epidemic pleurodynia, herpes Zoster, costochondritis)



C.h.e.s.t.
M.a.p.p.e.d

Endocarditis, Clinical Manifestations: LIME

Local (ie, valvular vegetations and destruction)
Immune complexes (ie, retinal Roth spots, renal lesions, Janeway lesions, Osler's nodes)
Metastatic lesions (ie, bacterial "mycotic" aneurysms)
Embolic (ie, splenic, cerebral, renal and adrenal infarcts)



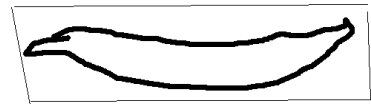
Hypertension, Effects on Organs: HIGHER PEa

Heart (ie, left ventricular hypertrophy, angina, myocardial infarction)
Infarction in brain

g
Hemorrhage in brain
Encephalopathy
Renal disease (eg, glomerulosclerosis)

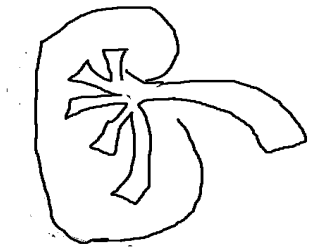
Peripheral vascular disease
Eyes (ie, arteriolar narrowing, retinal hemorrhages and exudates, papilledema)

a



Hypertension, Secondary Causes: RENALS

Renal (eg, glomerulonephritis, renal artery stenosis)
Endocrine (eg, Cushing's disease, Conn's syndrome, pheochromocytoma, acromegaly, corticosteroids, oral contraceptive pill)
Neurogenic (eg, raised intracranial pressure)
Aortic coarctation
Little people (ie, pregnancy-induced hypertension)
Stress (eg, trauma, white coat hypertension)



Digoxin, Drug Interactions: QuACK

Quinidine
Amiodarone
Calcium-channel blockers (especially verapamil)



Tachycardia, Causes: MD PISH^3

- Metabolic (eg, thyrotoxicosis)
- Drugs (eg, sympathomimetics, anticholinergics)
- Pain
- Ischemia
- Sepsis
- Hypotension
- Hypoxia
- Hypercarbia



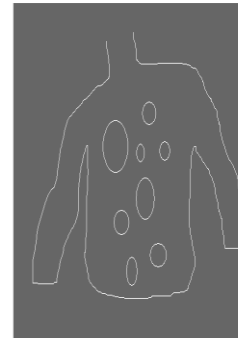
Thrombolysis, Contraindications to Use of Streptokinase or TPA: S^5

- Stroke within 3 months
- Stomach ulcer or other GI bleed
- Surgery within the past six weeks
- Severe hypertension
- Streptokinase received previously (then can give tPA)

Chest X-ray: cavitating lesions differential: WEIRD HOLES

- Wegener's disease
- Embolic (pulmonary, septic)
- Infection (anaerobes, pneumocystis, TB)
- Rheumatoid (necrobiotic nodules)
- Developmental cysts (sequestration)
- Histiocytosis
- Oncological
- Lymphangioliomyomatosis
- Environmental, occupational
- Sarcoid

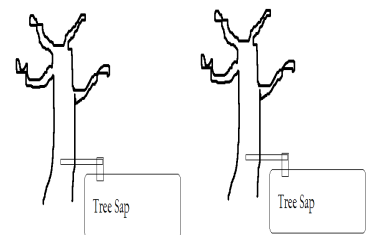
---LW Mason



Murmurs: systolic types: SAPS

- Systolic
- Aortic
- Pulmonic
- Stenosis

Systolic murmurs include aortic and pulmonary stenosis. Similarly, it's common sense that if it is aortic and pulmonary stenosis it could also be mitral and tricuspid regurgitation].



Myocardial Infarction: signs and symptoms

PULSE

- Persistent chest pain
- Upset stomach
- Lightheadedness
- Shortness of breath
- Excessive sweating

---Sara Nemetz

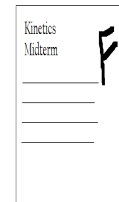


Congestive Heart Failure: causes of exacerbation

FAILURE

- Forgot medication
- Arrhythmia/ Anaemia
- Ischemia/ Infarction/ Infection
- Lifestyle: taken too much salt
- Upregulation of CO: pregnancy, hyperthyroidism
- Renal failure
- Embolism: pulmonary

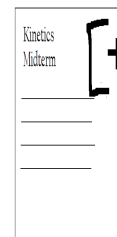
---Lau Yue Young Geoffrey



Murmurs: systolic vs. diastolic

- PASS: Pulmonic & Aortic Stenosis=Systemic.**
- PAID: Pulmonic & Aortic Insufficiency=Diastolic.**

---W. Ciulla

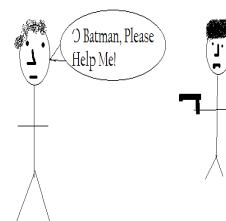


Myocardial Infarction: therapeutic treatment

O BATMAN!

- Oxygen
- Beta blocker
- ASA
- Thrombolytics (eg heparin)
- Morphine
- Ace prn
- Nitroglycerin

---Kristy Thomas



Coronary artery bypass graft indications: DUST

- Depressed ventricular function
- Unstable angina
- Stenosis of the left main stem

Triple vessel disease

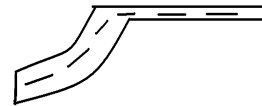
---Sushant Varma



Exercise ECG testing contraindications: RAMP

- Recent MI
- Aortic stenosis
- MI in the last 7 days
- Pulmonary hypertension

---Sushant Varma



ECG T wave inversion causes: INVERT

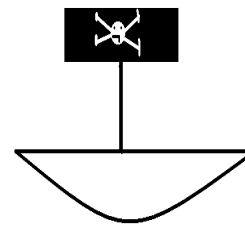
- Ischemia
- Normality [esp. young, black]
- Ventricular hypertrophy
- Ectopic foci [eg calcified plaques]
- RBBB, LBBB
- Treatments [digoxin]

1 I 2 5
3 3

---Robert O'Connor

Atrial fibrillation causes: PIRATES

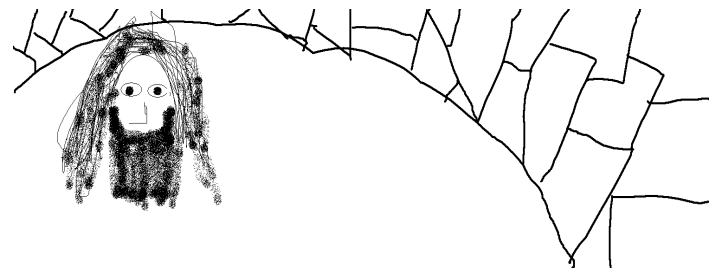
- Pulmonary: PE, COPD
- Iatrogenic
- Rheumatic heart: mitral regurgitation
- Atherosclerotic: MI, CAD
- Thyroid: hyperthyroid
- Endocarditis
- Sick sinus syndrome



Blue toe (microembolic toe)

CAVEMAN

- Cholesterol embolizations
- Atrial fib with electricity or digitoxin
- Valvular problems
- Endocarditis
- Mural thrombosis
- Aneurysm/ AV fistula
- Nothing



---Samuel Atom Baek-Kim

Angina Pectoris, Precipitants: 4 E's

Emotional upset
Exertion
Exposure to cold air
Eating large meal

Hypertension, Treatment: ABCDE

ACE inhibitors
Beta-blockers
Calcium-channel blockers
Diuretics
Exercise, weight loss, and dietary modifications (try first)

Myocardial Infarction, Medical Management: ABCDE

ASA
Beta-blocker
Coagulation (i.e., thrombolytic; add heparin for anterior MI)
Dilator (i.e., ACE inhibitor)
Elevated lipids (measure fasting lipids within 48 hours of admission, and start a statin agent if total cholesterol or LDL are elevated).

T-Wave Inversion on the ECG, Causes: BIND HEP

Bundle-branch block
Infarction
Normal (in AVR and V1)
Digoxin effect

Hypertrophy of left ventricle with strain
Embolus (ie, pulmonary embolism)
Pericarditis

Valve Disease, Causes: DIC

Degenerative (most common in North America)
Inflammatory (e.g., lupus, rheumatic fever)
Congenital (e.g., bicuspid aortic valve, Marfan's syndrome)

COMMUNITY HEALTH AND OCCUPATIONAL MEDICINE

Carcinogens, Known Types: A²B²C²

Arsenic (causes skin cancer)
Asbestos (causes mesothelioma, laryngeal cancer)
Benzidine dye (causes bladder cancer)
Beta-naphthylamine (causes bladder cancer)
Chromium (causes nasal cancer)
Chloride vinyl (causes liver angiosarcoma)

Report Card

A- Asbestos
A- Arsenic
B- Benzidine
B- Beta-naphthylamine
C- Chromium
C- Chloride vinyl

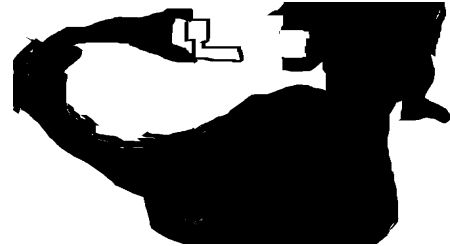
Lead Poisoning, Clinical Manifestations: CRACK

CNS (headache, memory loss, personality changes, encephalopathy)
Reproductive (abortion, stillbirth)
Anemia (microcytic)
Colic ("lead colic" abdominal pain)
Kidney (proximal tubular damage, interstitial fibrosis)



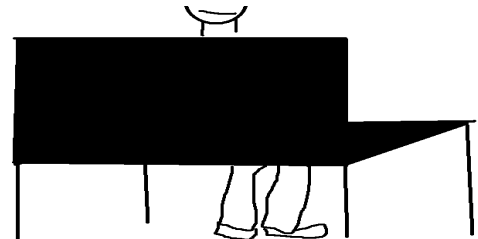
Occupational Lung Disease, Classification: ASTHMA

Asthma
Silicosis
Toxic gases
Hypersensitivity pneumonitis (ie, extrinsic allergic alveolitis)
Many others
Asbestosis



Erythema Nodosum, Causes: SITS

Sarcoidosis
Inflammatory bowel disease
TB
Streptococcal infection (post-infectious)



DERMATOLOGY

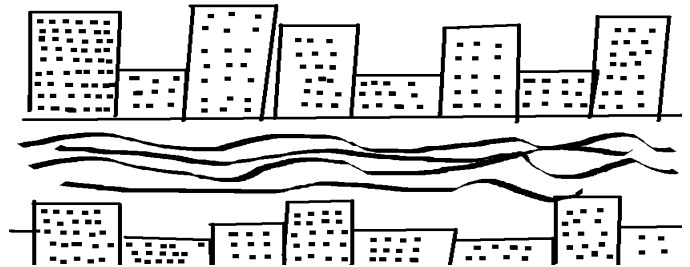
Toxic Epidermal Necrolysis characteristics :TEN

Thickness
Epidermal
Necrosis



Neurofibromatosis, Clinical Characteristics: CANAL

Cafe-au-lait spots
Autosomal dominant, gene 17
Neurofibromas of the skin
Associated findings (eg, optic gliomas, Multiple Endocrine Neoplasia)
Lisch nodules (hamartomas) of the iris, seen under slit lamp



Malignant Melanoma, Diagnostic Characteristics: ABCD

Asymmetry of lesion
Border irregularity
Colour variegation
Diameter greater than 6 mm

(Source: Friedman and Rigel 1985)

Staphylococcal Scalded Skin Syndrome (SSSS) vs Toxic Epidermal Necrolysis (TEN): Pathological Difference

SSSS is Superficial Subcorneal Skin Separation

TEN is full-Thickness Epidermal Necrosis

EMERGENCY MEDICINE/TRAUMA

Anaphylaxis, Treatment: ANAPHYLAXIS

Adrenalin 0.01 mg/kg IM or IV

Noradrenalin, 8 mg in 500 mL 2/3 1/3, at 2 mL/min infusion for average adult

Antihistamine (ie, diphenhydramine 1 mg/kg IM/IV over 3 min)

Proximal placement of tourniquet to relative to antigen site (eg, bee sting), removed every 15 minutes

H2 histamine blocker (ie, ranitidine 50 mg or cimetidine 300 mg IV) for refractory hypotension) -- unproven value

Yell for help and oxygen, 100% by mask

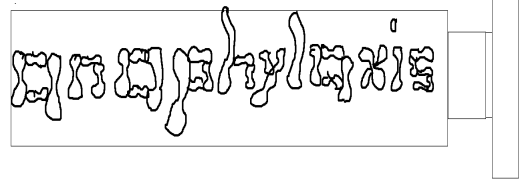
Lower extremity elevation, patient in recumbent position

Aminophylline, 6 mg/kg IV over 20 minutes, to control bronchospasm

Xtra (ie, extra) treatments for patients already on beta-blockers (ie, isoproterenol 2-20 micrograms/kg/min to achieve heart rate of 60/min; or atropine 0.5 mg IV q 5 min until heart rate above 60/min)

Intubation

Steroids (eg, hydrocortisone 100 mg IV push and then 100 mg in 500 mL 2/3 1/3 q 2-4 hours; or methylprednisone 1 mg/kg IV push, and then 1 mg/kg IV q 8 hours)



Trauma Patient, Initial Assessment and Management: ABC⁴

Airway

Breathing

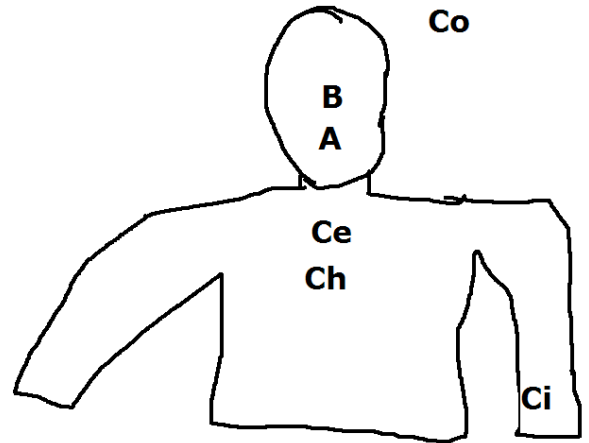
Circulation

Cervical spine injury

Chest (tension pneumothorax, flail chest, pericardial tamponade)

Consciousness (assess level according to the Glasgow Coma Scale)

(Source: Budassi Sheehy 1984)



Trauma Patient, Initial Assessment and Management: ABCDEF

Airway/breathing (C-spine stabilization is actually first)

Bleeding sites

Central nervous system

Digestive organs

Excretory organs (ie, urine colour, quantity)

Fractures

Drug Toxicity/Overdose Blood Tests to Think About A^6

Alcohols (ethanol, methanol, ethylene glycol)

ASA

Acetaminophen

Anticonvulsants (phenytoin, phenobarbital)

Antidepressants (tricyclics, lithium)

Anxiolytics (benzodiazepines)

Iron Overdose, Symptoms and Signs: HIS HeP

Hemorrhagic gastroenteritis (30-60 minutes post-ingestion)

Improvement (appears improved 2-12 hours post-ingestion)

Shock (12-48 hours post-ingestion)

Hepatic damage with possible hepatic failure (late)

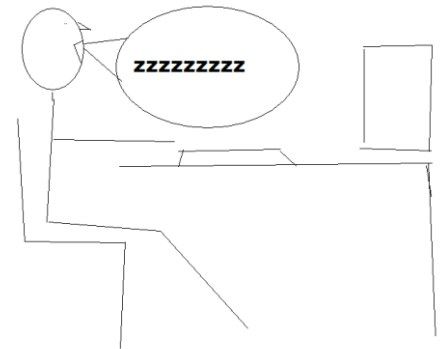
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Pyloric stenosis (residual complication)

ENDOCRINOLOGY

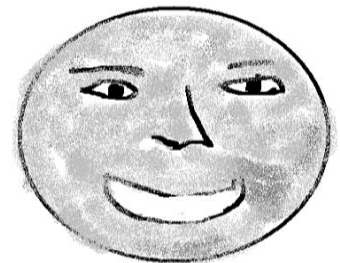
Addison's Disease, Clinical Findings: FATIGUED

- Fatigue -- 94%
- Antibodies (ie, anti-adrenal-- 52%, antithyroid -- 36%, antiparietal cell -- 25%)
- Triad: hyponatremia -- 67%, hyperkalemia -- 55%, azotemia -- 52%
- Increased pigmentation of skin -- 91%, tongue/cheeks -- 56%
- Gastrointestinal: Weight loss -- 90%, anorexia -- 80%, Nausea and vomiting -- 66%
- Eosinophilia, neutropenia -- common
- Decreased blood pressure (ie, hypotension) -- 81%



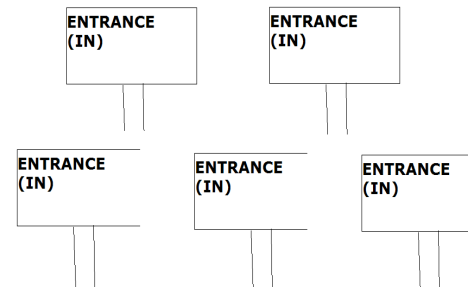
Cushing's Syndrome, Symptoms and Signs: MOON FACE

- Menstrual changes
- Osteoporosis
- Obesity
- Neurosis
- Facial plethora (moon face, hirsutism)
- Altered muscle
- Color of skin
- Elevated blood pressure



Diabetic Ketoacidosis, Precipitants of: In^5

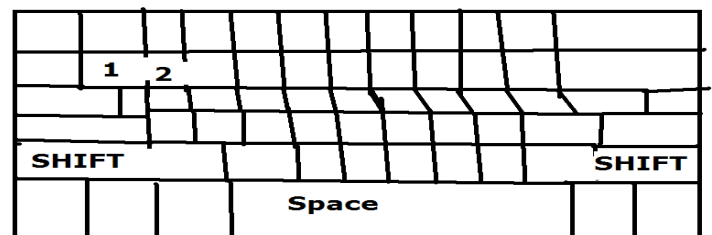
- Insulin deficiency
- Infarction (ie, myocardial infarction)
- Infection (eg, viral respiratory tract infection)
- Injury (ie, trauma)
- Infant (ie, pregnancy)



Hypercalcemia, Causes: SHIFT

- Sarcoidosis (and other granulomatous diseases)
- Hyperparathyroidism, Hyperthyroidism
- Immobilization
- Familial
- Tumour, Thiazides (Others: lithium, vitamin D)

(Source: Wynne and Fitzpatrick 1991)



Hypercalcemia, Causes: SIR

Skeletal resorption enhanced: Hyperparathyroidism (usually due to a single parathyroid adenoma), malignancy (eg, bronchial carcinoma), hyperthyroidism, immobilization
Intestinal absorption enhanced: Granulomatous disease (eg, tuberculosis, sarcoidosis), vitamin D intoxication
Renal excretion reduced: Diuretic ingestion



Hypermagnesemia, Causes: RENAL

Renal failure
Exogenous loads (e.g., MgSO₄, magnesium-containing antacids)
Necrosis of tissue (e.g., burns)
Adrenal insufficiency
Lithium intoxication



Hypoglycemia, Causes: ExPLAIN

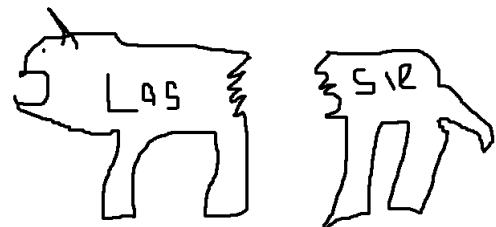
Exogenous: Insulin, oral hypoglycemic agents, ethanol and ASA excess
Pituitary insufficiency
Liver failure
Adrenal insufficiency (e.g., Addison's disease)
Immune (i.e., anti-insulin antibodies)
Neoplastic (e.g., insulinoma, sarcoma, mesothelioma)



(Source: Dr. H. Gerstein, Hamilton, Ontario)

Osteoporosis, Causes: COLLES FRACTure

Congenital (e.g., osteogenesis imperfecta, Ehlers-Danlos, homocysteinuria)
Osteoporosis type I (post-menopausal) & type II (senile)
Leukemia & other malignancies (e.g., multiple myeloma)
Liver disease
Endocrine disease (e.g., hyperparathyroidism, hyperthyroidism, acromegaly, Cushing's syndrome, hypogonadism, diabetes mellitus)
Steroids (i.e., corticosteroids)
Familial
Renal disease
Anticonvulsants (e.g., phenytoin)
Calcium deficiency (e.g., malabsorption)
(Based upon: Wynne and Fitzpatrick 1991)



Pituitary hormones

FLAGTOP

Follicle stimulating hormone

Lutinizing hormone

Adrenocorticotropin hormone

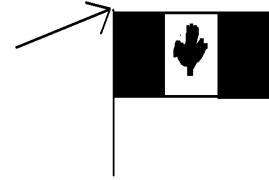
Growth hormone

Thyroid stimulating hormone

Oxytocin

Prolactin

· *Note: there is also melanocyte secreting hormone and Lipotropin, but they are not well understood.*



Graves' Ophthalmopathy, Clinical Characteristics: PREDNISOL

Proptosis

Retraction of eyelids (Dairymple's sign)

Edema (periorbital)

Diplopia

Neuropathy of optic tract (leads to poor visual acuity)

Inhibited upward gaze

Skin changes (eg, pretibial myxedema, peu d'orange)

Onset ages 20-40

Lid lag on downward gaze (Graefe's sign)

Hyperthyroidism: "Myxedema is not myxedema"

That is, "the physical sign of pre-tibial myxedema is not found with hypothyroidism (myxedema), but with hyperthyroidism of Grave's disease."

Hypomagnesemia, Causes: 10 Ds

Diarrhea & gastrointestinal losses

Diuretics & renal losses

Diabetes mellitus & endocrine causes

Dietary insufficiency

Diverted to free fatty acids

Drugs (e.g., cisplatin, amphotericin B, diuretics)

Drinking excess amounts of ethanol

Delivery with toxemia of pregnancy

Decompensated heart, lungs or liver

Denuded skin (e.g., burns)

(Based upon: Iseri, Allen and Brodsky 1989)

Multiple Endocrine Neoplasia (MEN), Classification

MEN Type 1 ("**W**"on = **Wermer's syndrome**): i. Pituitary adenoma, ii. Pancreatic adenoma
iii. Parathyroid adenoma

MEN Type 2 ("**S**"econd = **Sipple's syndrome**): i. Pheochromocytoma, ii. Parafollicular (medullary) thyroid cancer
iii. Parathyroid adenoma

MEN Type 3 (like MEN Type II, but with cutaneous neuromas)

Osteoporosis, Treatment: ABCDE

Activity & exercise

Biphosphonate drugs

Calcium supplementation (e.g., 1000 mg/day)

D(vitamin D supplement)

Estrogens (for post-menopausal women)

Pheochromocytoma, Clinical Characteristics: P⁸

Palpitations

Pallor

Perspiration

Panic

Paroxysmal attacks

Pain (headache, chest, abdominal)

Paradoxical rise in blood pressure with beta-blockers

Pregnancy-associated hypertension in some cases

Thyroid Malignancies, Age-Associated Types:

Papillary carcinoma seen in **P**ediatric group

Medullary(parafollicular) carcinoma seen in **M**iddle-aged group

Anaplastic carcinoma seen in **A**ged group

Follicular carcinoma seen in all groups

ETHICS

Critically III, Guide to Ethical Decision-Making: 3R's and Q.C.

Rational: Does the intervention meet the test of competent assessment (diagnosis) and scientifically proven benefit?

Redeeming: What is the risk/benefit of the intervention? Are known risks and iatrogenic complications weighed against anticipated benefits?

Respectful: Does the intervention respect the rights of the patient?

Toronto's Waste Management System *Reduce, Reuse, Recycle*

Questions and Comments

Quality of life: Is the intervention "good" for that patient in human terms? Is it compatible with priorities of the patient, the family, the society?

Cost: Is the monetary cost/reward of the intervention appropriate for the patient, the family, society?

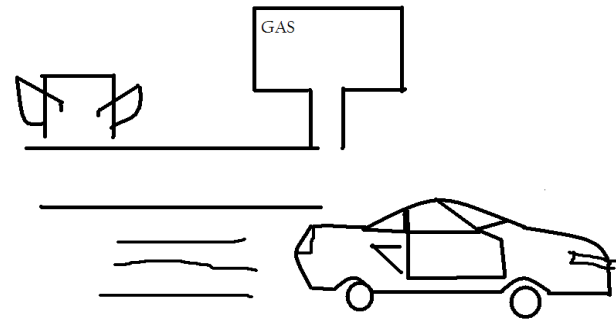
(Source: Weil, Weil, Rackow 1988)

GASTROENTEROLOGY

Bacterial Overgrowth Syndrome, Risk Factors: PASSED GAS

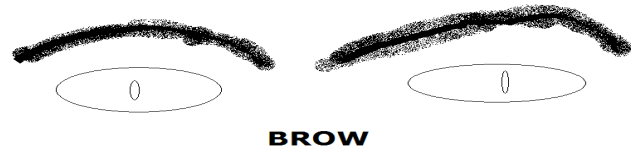
- Pernicious anemia
- Achlorrhya
- Steroids (i.e., corticosteroids)
- Scleroderma
- Endocrine (i.e., diabetes mellitus, hypothyroidism)
- Diverticula of jejunum

- Gastrectomy (i.e., partial gastrectomy)
- Antibiotics
- Strictures within the small bowel



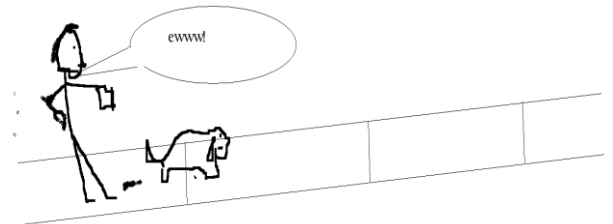
Celiac Disease, Treatment/Prevention: Elimination of Gluten-Containing Foods (BROW) From the Diet

- Barley
- Rye
- Oats
- Wheat



Constipation, Treatment: FECES

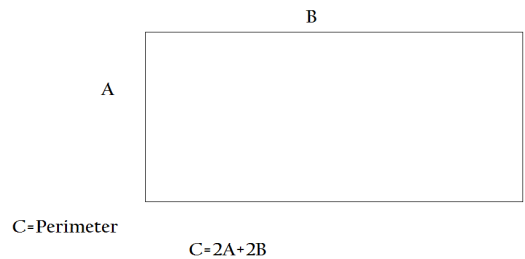
- Fluid and fibre intake
- Exercise
- Cathartics (eg, lactulose)
- Elimination of constipating medications
- Stimulation of the gatrocolic reflex (ie, enema)
- (Source: Rousseau 1988)



Hepatic Disease, Factors Used in the Child-Pugh

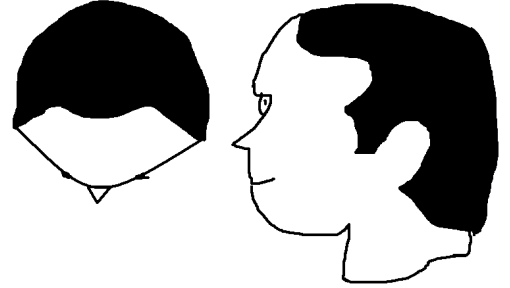
Classification: A^2B^2C^1

- Ascites: absent, moderate, or tense
- Albumin level: > 35 g/L or < 30 g/L
- Bleeding (Prothrombin Time/INR): normal or increased
- Bilirubin level: < 20 g/L or > 30 g/L
- Cephalopathy (ie, encephalopathy): none, grade I, II, III, or IV



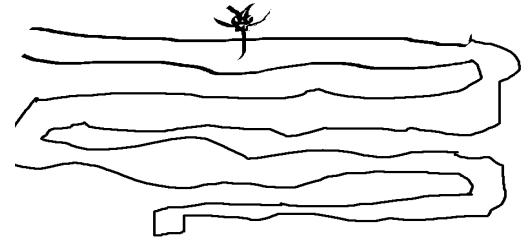
Hepatic Encephalopathy, Symptoms and Signs: SCALP

- Sychosis
- Confusion
- Asterixis
- Lethargy --> coma (late sign)
- Personality changes (early sign)



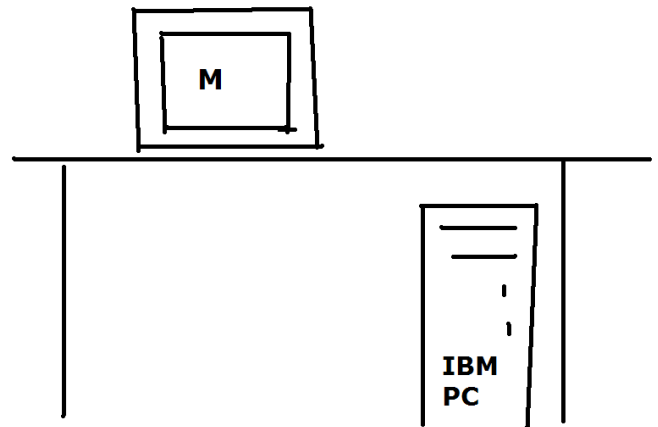
Inflammatory Bowel Disease, Extra-intestinal Manifestations: STINGSS

- Sclerosing cholangitis
- Thromboembolic disease
- Nephrolithiasis (i.e., calcium oxalate, urate stones)
- Skin (i.e., aphthous ulcers, pyoderma gangrenosum, erythema nodosum)
- Seronegative spondyloarthropathies



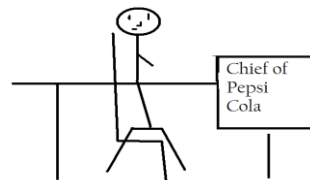
Splenomegaly, Causes: IBM PCM

- Infectious (eg, Viral: Epstein-Barr, herpes; Parasitic: malaria, schistosomiasis, babesiosis, kala-azar = visceral Leishmanniasis; Bacterial: subacute bacterial endocarditis)
- Blood disease (eg, hemolytic anemia, hereditary spherocytosis, hemoglobinopathies(ie, sickle-cell disease, thalassemias)
- Malignancy (eg, Hodgkin's lymphoma, leukemias)
- Portal hypertension (ie, Banti's syndrome)
- Connective tissue disease (eg, sarcoidosis, systemic lupus erythematosus, polyarteritis nodosa)
- Miscellaneous (eg, Gaucher's disease, Niemann-Pick disease)



Pepsin-producing cells: Chief of Pepsi-Cola
Chief cells of stomach produce Pepsin.

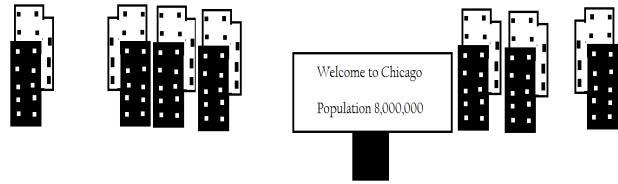
---Dr. Atif Farooq Khawaja Rawalpindi



Splenomegaly causes: CHICAGO

Cancer
Hem, onc
Infection
Congestion (portal hypertension)
Autoimmune (RA, SLE)
Glycogen storage disorders
Other (amyloidosis)

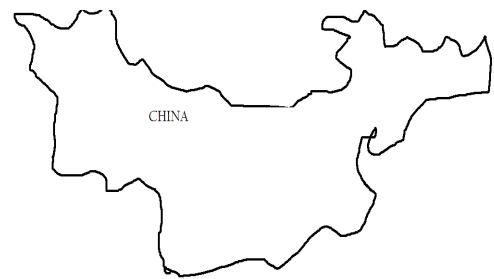
---Gerard Dang



Splenomegaly causes: CHINA

Congestion/ Cellular infiltration
Haematological (eg haemolytic anaemia, Sickle cell)
Infection/ Infarction (eg malaria, GF, CMV)
Neoplasia (eg CML, lymphoma, other myeloproliferative)
Autoimmune

---Jamal Khan



Ascites, Causes: P^4

Peritonitis (peritoneal carcinomatosis, post-irradiation, peritoneal dialysis, pancreatitis, mesothelioma, bacterial, TB, fungal, parasitic)
Peritoneal lymphatic obstruction (traumatic, congenital)
Protein deficiency (cirrhosis, protein-losing enteropathy, nephrotic syndrome, kwashiorkor)
Portal hypertension (pre-hepatic, hepatic, post-hepatic causes)

Colonic Adenocarcinoma, Treatment

Rectal gets **Radiation** (i.e., Duke's stage B or C gets radiation therapy regardless of other therapy)
C gets **chemo** (i.e., Duke's stage C benefits from chemotherapy regardless of other therapy)

Gallstone Disease, Risk Factors: CHOLEsterol PIGment

Cirrhosis of liver
Hemolysis
Obesity
Parity > 2
Indian (ie, North American Indian)
Gender (ie, female, fair, fat, forty, flatulent and fertile)

Gastric Carcinoma, Risk Factors: A^5

Anemia (ie, pernicious anemia)

Achlorrhylia

Atrophic gastritis

Adenomas (ie, gastric adenomas)

A blood type

Megacolon, Causes: C^5

Congenital megacolon (Hirschsprung's disease)

Colitis (Crohn's disease and ulcerative colitis)

Cancer of the bowel

Chagas' disease (Trypanosoma cruzi destroy the bowel plexus)

Crazy (functional megacolon)

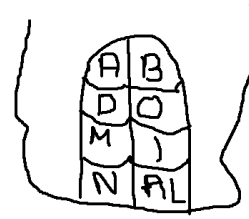
(Note: The last four causes present well after birth)

GENERAL SURGERY

Abdominal Pain, Acute, Differential Diagnosis:

ABDOMINAL

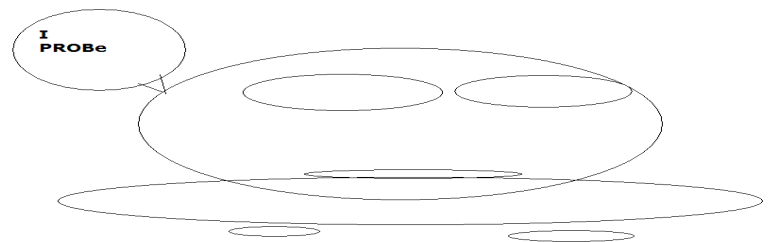
Appendicitis
Biliary tract disease
Diverticulitis
Ovarian disease
Malignancy
Intestinal obstruction
Nephritic disorders
Acute pancreatitis
Liquor (ethanol)



Duodenal Ulcer, Indications for Surgical

Management: I PROB

Intractable pain
Perforation
Refractive to medical treatment
Obstruction (ie, of the gastric outlet)
Bleeding



Venous Insufficiency, Signs: STUBbED

Stasis dermatitis
Trendelenberg test positive
Ulceration of medial malleolus
Brown pigment coloration
b
Edema
Dependency pain (ie, painful when leg below body level)



Anal Pain, Differential Diagnosis: H^2A^2F^2

Hemorrhoids,
Hematoma
Abscess,
Anal Prolapse
Fistula,
Fissure

Laparotomy, Emergency Indications: PERFS

Peritonitis
Evisceration
Ruptured ectopic pregnancy
Free air in peritoneal cavity
Shock, with blood from rectum, nasogastric tube, or bladder

GYNECOLOGY

Oral Contraceptive Pill, Absolute Contraindications to its Use: OCP H^3

Oestrogen-dependent tumours (eg, hepatocellular carcinoma and adenoma, uterine carcinoma, breast carcinoma)

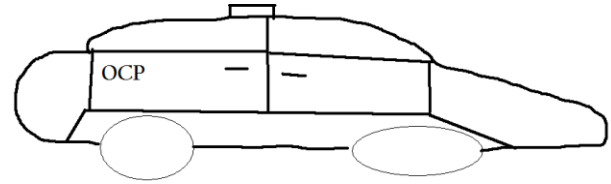
Cardiovascular disorders (ie, thromboembolic, cerebrovascular and coronary artery disease, and moderate to severe hypertension)

Pregnancy

Hepatic disease

Hyperlipidemia

Hemorrhage from vagina not yet diagnosed



Orange County Police
Squad Car H3

Pelvic Mass That is Painful, Differential Diagnosis: CREAM

PEA

Cyst (ie, ovarian cyst)

Renal colic

Ectopic pregnancy

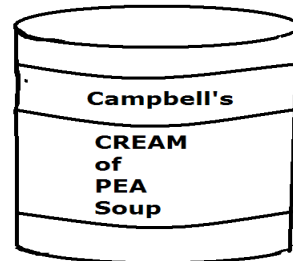
Adhesions

Many other causes

Pelvic inflammatory disease

Endometriosis

Appendicitis/appendicial abscess

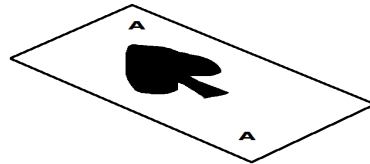


Post-menopausal Painless Vaginal Bleeding, Causes: ACE

Atrophic vaginitis

Cervical carcinoma

Endometrial carcinoma



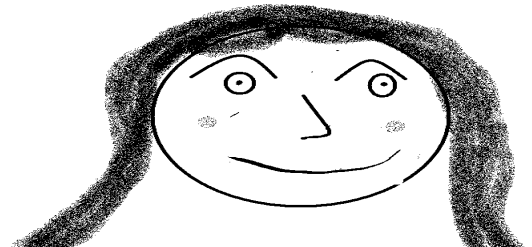
Uterine (Endometrial) Carcinoma, Risk Factors: HEAD

Hypertension

Estrogen Unopposed (ie, post-menopausal estrogen administration, nulliparity, late-onset menopause, polycystic ovary disease, obesity)

Atherosclerosis

Diabetes mellitus



Vulvar Pruritus, Differential Diagnosis: ILL DOC

Infection: Candidiasis, oxyuris vermicularis (pinworms), trichomonas vaginalis

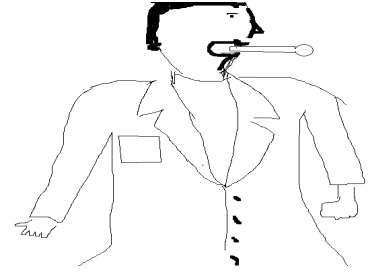
Lichen sclerosis et atrophicus

Lichen simplex (ie, neurodermatitis)

Diabetes mellitus

Oestrogen deficiency (ie, post-menopausal)

Contact dermatitis



Endometrial carcinoma: risk factors: HONDA

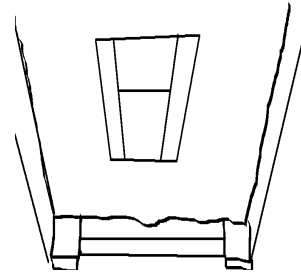
Hypertension

Obesity

Nulliparity

Diabetes

Age (increased)



Gestational Trophoblastic Neoplasia (Hydatidiform Mole, Choriocarcinoma), Symptoms and Signs: TALIEST FETA

Threatened abortion" picture (with prune juice vaginal bleeding)

Anorexia

Large for dates (ie, large uterus)

I

Emesis gravidarum (ie, hyperemesis gravidarum)

Sore uterus (ie, tender, doughy uterus)

Fetus absent on ultrasound

Eclampsia (ie, pre-eclampsia or eclampsia in first or second trimesters)

Thyrotoxicosis

Anemia

Ovarian Carcinoma, Types: MEGS-GEMS

Metastatic Tumours (Krukenberg gastrointestinal, breast, endometrial, lymphoma)

Epithelial Tumours (serous, mucinous, endometrioid, clear cell, undifferentiated, Brenner's)

Germ Cells Tumours (dysgerminoma, immature teratoma)

Sex Cord Stromal Tumours (granulosa cell, Sertoli-Leydig cell, thecoma)

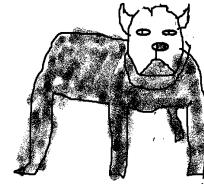
HEMATOLOGY

Intrinsic vs. extrinsic pathway tests: PeT PiTTbull

PeT: PT is for extrinsic pathway.

PiTTbull: PTT is for intrinsic pathway.

---Marcus James Fidel Medical Student, University of New Mexico



Anemia, Normocytic-Normochromic, Causes: Cream Pile

Connective tissue disease

Renal disease

Endocrinopathy (ie, hypothyroidism, Addison's disease, hypopituitarism, hypoparathyroidism)

Amyloidosis

Pregnancy

Infectious (abscess, subacute bacterial endocarditis)

Liver disease

Everything else (eg, malnutrition, malignancy)

Chronic Lymphocytic Leukemia, Classic Feature:

CELL

CLL

See smudge cells on microscopy (smudge CELL = CLL)

Disseminated Intravascular Coagulation, Causes: TOM'S V

Trauma (especially brain trauma)

Obstetrical (ie, abruptio placenta, retained fetus, placenta previa, septic abortion)

Malignancy

Sepsis (eg, meningococcemia, E. coli)

Venom (usually from viper snake bites)

Hodgkin's Disease, Clinical Features: WA^3RM L

IMFHS

Weight loss (30%)

Anemia,

Abdominal pain,

Alcohol-induced pain in lymph nodes

Regional lymphadenopathy

Mediastinal involvement

Lymphadenopathy (neck 60%, axillary 25%, groin 15%)

Itchiness (12%)

Mediastinal involvement (eg, compression of local structures)

Fever (30%), night sweats (30%), Pel-Epstein fever (rare)

Hyperuricemia (eg, manifesting as gout)

Splenomegaly (30%)

Multiple Myeloma, Symptoms and Signs: POOR FAB

Pathological bone fractures

Osteoporosis

Osteolytic bone lesions on x-ray

Renal insufficiency or failure

Fatigue

Anemia

Bone pain

Myeloproliferative Disorders, Clinical and Laboratory Features: PEPTIC

Pruritus

Ecchymoses

Peptic ulcer disease

Thrombosis

Increased blood levels of: uric acid, LDH, B12, histamine, eosinophils, basophils

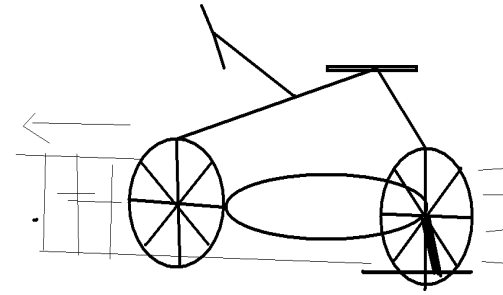
Causes: Chronic myelogenous leukemia, polycythemia rubra vera, thrombocythemia, myelofibrosis

INFECTIOUS DISEASES

Exposures to Infectious Agents, Diagnosis: COASTED

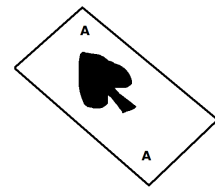
- Contacts (e.g., family, friends, co-workers)
- Oral ingestion (e.g., seafood, restaurants, picnics)
- Animal exposure (e.g., pets, wild animals)
- Sexual history (e.g., sexual orientation, number of partners, use of prostitutes)
- Travel history
- Employment exposure (e.g., animals, insects, fumes)
- Drug history (e.g., illicit drugs, needle sharing, over-the-counter medications)

(Source: Gettler 1991)



Rheumatic Fever, Jones' Major Diagnostic Criteria: ACCES

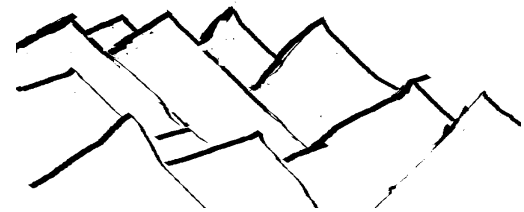
- Arthritis (ie, migratory arthritis)
- Carditis
- Chorea (ie, Sydenham's chorea or St. Vidas' Dance)
- Erythema marginatum
- Subcutaneous nodules



Urinary Tract Infection, Common Causative Organisms:

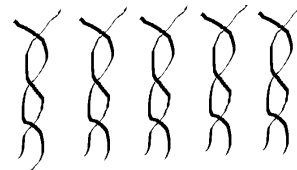
PEEKS

- Proteus
- E. Coli
- Enterococcus
- Klebsiella
- Serratia



DNA viruses morphology rule of thumb: DNA

- Double-stranded
- Nuclear replication
- Anhelical symmetry
- Rule breakers: *pox* (cytoplasmic), *parvo* (single-stranded).



---Robert O'Connor

Docket John's major criteria: ACNES

- Arthritis
- Carditis
- Nodule (subcutaneous)
- Erythema marginatum
- Sydenham chorea



---Atif Farooq Khawaja Rawalpindi

Tuberculosis: antibiotics used

STRIPE

STreptomycin
Rifampicin
Isoniazid
Pyrazinamide
Ethambutol



---Sushant Varma

Tuberculosis: treatment

If you forget your TB drugs, you'll die and might need a **PRIEST**

Pyrazinamide
Rifampin
Isoniazid (INH)
Ethambutol
STreptomycin



---Hugo Basterrechea

Bloody Diarrhea, Infectious Causes:

CESS? YECh!

Campylobacter jejuni
E. Coli (enterohemorrhagic strains)
Salmonella
Shigella
Yersinia enterocolytica
Entamoeba histolytica
Clostridium difficile

Pneumonia, Community-Acquired, Non-Immunocompromised, Causes:

C PHLEMS

Chlamydia pneumoniae
Pneumococcus
Haemophilus influenzae
Legionella sp.
Everything else (e.g., viral Influenzae)
Mycoplasma pneumoniae
Staphylococcus aureus

Scarlet Fever, Symptoms and Signs:

SCARLET

Streptococcus pyogenes (ie, causative organism is Group A beta-hemolytic streptococcus)
Circumoral pallor
Areas of desquamation of skin (late finding)
Rash (ie, sandpaper scarlatiniform rash, especially in axillae, groin)
Laryngitis/pharyngitis
Elevated temperature
Tongue (ie, initially, white strawberry tongue, then red)

METABOLIC DISEASES

Hemochromatosis, Clinical Manifestations:

ABCDEFG

Arthralgias

Bronzed skin colour

Cardiac (enlargement, heart failure, conduction abnormalities)

Diabetes

Early in life (aged mid-30's upon presentation)

Ferritin (serum) elevated

Gonadal involvement (decreased libido, infertility)

Porphyria, Diagnostic Tests:

1) **A**cute Intermittent

Porphyrin (**AiP**)

ALA (increased urinary **aminolevulinic acid**)

PBG (increased urinary **porphobilinogen**) ppl

2. **P**orphyrin

Cutanea **T**arda (**PCT**):

CP (increased urinary **coproporphyrin**)

NEPHROLOGY

Glomerulonephritis in Childhood:

HIS PISH

Henoch-Schonlein purpura

IgA nephropathy (ie, Berger's Disease)

Systemic lupus erythematosus

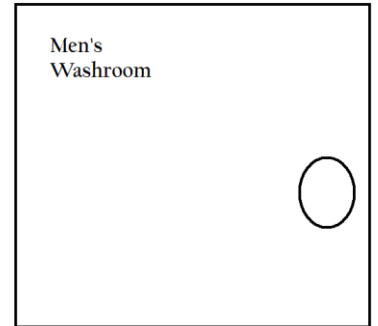
Post-streptococcal glomerulonephritis

Immune vasculitis (eg, Wegener's granulomatosis, polyarteritis nodosa)

Subacute bacterial endocarditis

Hemolytic-uremic syndrome

Note: "Pish" is the Yiddish word for urine



Hematuria, Causes:

SIT^3 Gn

Stones (ie, kidney stone)

Infection (ie, urinary tract infection)

Tuberculosis,

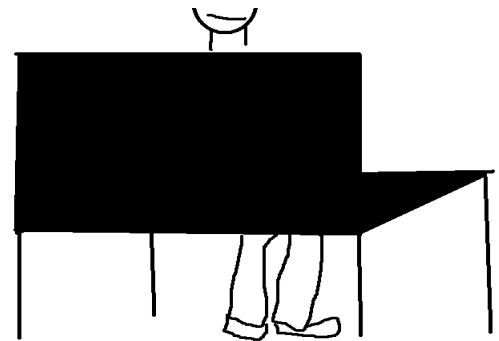
Trauma,

Tumour (ie, renal or bladder cancer)

Glomerulo

nephritis

(Source: Dr. L. Lagrotteria, Hamilton, Ontario)



Nephritic Syndrome With Decreased Complement Levels, Causes:

LESS

Complement

Lupus

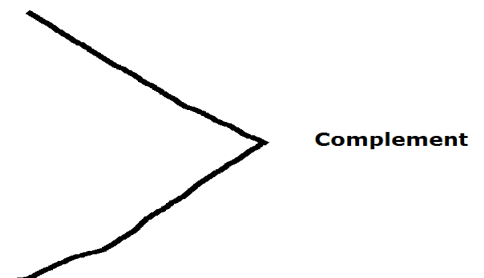
Endocarditis

Shunt infection-associated disease

Streptococcal glomerulonephritis

Cryoglobulinemia

(Source: Baird 1989)



Alkalosis vs. acidosis: directions of pH and HCO3

ROME

Respiratory= Opposite

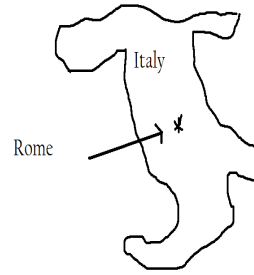
pH is high, PCO2 is down (Alkalosis).

pH is low, PCO2 is up (Acidosis).

Metabolic= Equal

pH is high, HCO3 is high (Alkalosis).

pH is low, HCO3 is low (Acidosis)



Aldosterone: regulation of secretion from adrenal cortex

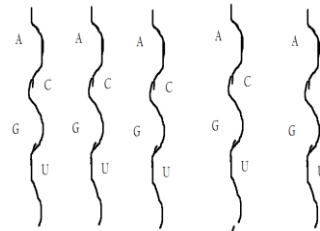
RNAs

Renin-angiotensin mechanism

Na concentration in blood

ANP (atrial natriuretic peptide)

Stress



---Tan Xin Yu

Metabolic acidosis: causes

USED CAR

Ureteroenterostomy

Saline hydration

Endocrinopathies (hyperparathyroid, hyperthyroid, Addison's)

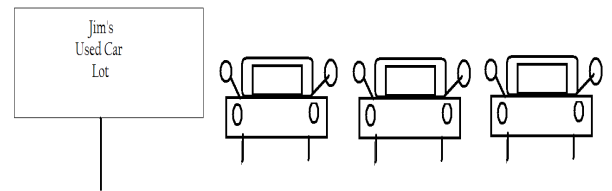
Diarrhea/ DKA/ Drugs

Carbonic anhydrase inhibitors

Ammonium chloride

Renal tubular acidosis

Alternatively: *USED CARP*, to include Parenteral nutrition/
Pancreatic fistula.



---J.J.H. and Vince Yamashiroya

Syndrome of Inappropriate Antidiuretic Hormone (SIADH), Drug Causes: "-ines"

Nicotine

Oxytocin

Vincristine

Carbamazepine

NEUROLOGY

Cerebellar Lesion, Signs:

D^3ARN It

Dysarthria, Dysdiadokokinesia, Dysmetria

Ataxia

Rebound phenomenon

Nystagmus

Intension tremor



Creutzfeldt-Jakob Disease, Signs:

B MAD

Blindness

Myoclonic movements of the limbs

Ataxia

Dementia (rapidly progressive in nature)



Headache, Classification:

VITAMIN

Vascular: migraine, cluster, toxic vascular, hypertensive

Inflammatory and Traction: Mass lesion (tumour, edema, hematoma, hemorrhage), arteritis, phlebitis, neuralgia, occlusive vascular disease, temporomandibular joint syndrome

Atypical variants

Muscle contraction headache: depressive equivalents and conversion reactions, cervical osteoarthritis, chronic myositis

Infectious (ie, meningitis, encephalitis)

Non-cranial sources: Eyes, ears, nose, throat, teeth



Migraine Headache, Symptoms:

PUPIL

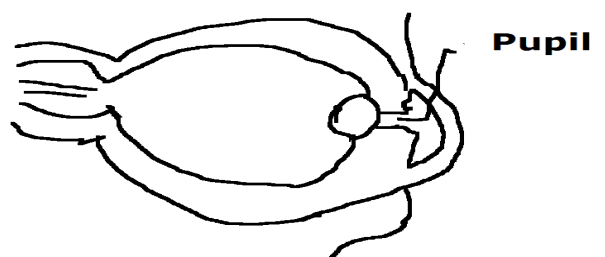
Pulsatile quality

Unilateral location

Physical activity worsens headache

Inhibits daily activity when present

Location: temporal region of head



Peripheral Polyneuropathy, Causes:

M²I²D²

Metabolic: Diabetes mellitus, amyloidosis, acute intermittent porphyria

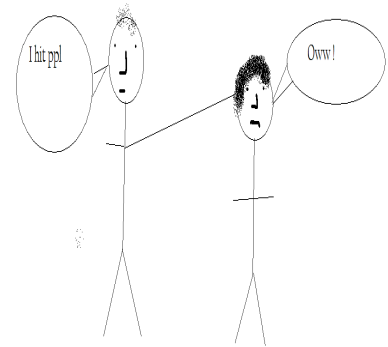
Miscellaneous: Guillain-Barre (acute infective polyneuritis),

Infections

Idiopathic

Drugs and chemicals

Deficiency states



Unconscious Patient, Initial Considerations of Causes: DEATHH

Diabetes mellitus (causing DKA, non-ketotic hyperosmolar coma, or hypoglycemia)

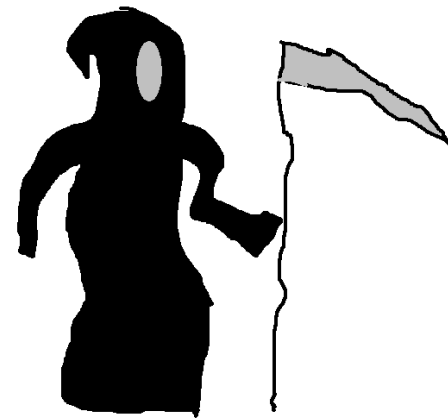
Epilepsy

Alcohol or drugs

Trauma

Hypertension (causing hypertensive encephalopathy or stroke)

Heart disease (causing myocardial infarction)



Unconscious Patient, Initial Treatments When Cause Unknown: DONT

Forget

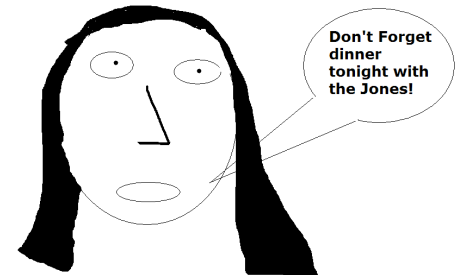
Dextrose, 50 mL of 50 per cent dextrose IV bolus

Oxygen, 40 per cent by mask

Naloxone, 1 mg IV initially, to maximum 10 mg

Thiamine 100 mg IV (give before dextrose)

Flumazenil, 0.1 mg IV push



Temporal lobe: location of high vs. low frequency recognition

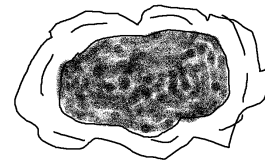
The bass clef looks like an ear.

Therefore, the bass clef [low frequency] is closer to the ear, and the treble clef [high frequency] is more medial.

---Robert O'Connor

Cerebellar damage signs: DANISH

- Dysdiadochokinesis
- Ataxia
- Nystagmus
- Intention tremor
- Slurred speech
- Hypotonia



---Grant Wilde and Kristian Mears

Thalamic boundaries

I HIT PPL (people)

Directions are in alphabetical order:

- Anterior: Interventricular Foramen
- Inferior: Hypothalamic nuclei (plane connecting them)
- Lateral: Internal capsule (posterior limb)
- Medial: Third ventricle
- Posterior: free Pole of Pulvinar
- Superior: Lateral ventricle
- Posterior has 2 P's.

---David Colbert

Stroke risk factors

HEADS

- Hypertension/ Hyperlipidemia
- Elderly
- Atrial fib
- Diabetes mellitus/ Drugs (cocaine)
- Smoking/ Sex (male)

---Rinku S. Uberoi

Wernicke-Korsakoff's psychosis: findings

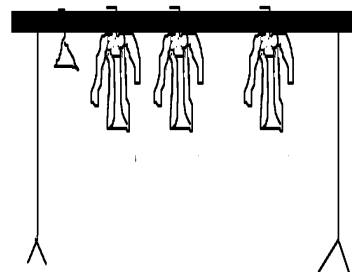
COAT RACK

· Wernicke's encephalopathy (acute phase):

- Confusion
- Ophthalmoplegia
- Ataxia
- Thiamine tx.

· Korsakoff's psychosis (chronic phase):

- Retrograde amnesia
- Anterograde amnesia
- Confabulation
- Korsakoff's psychosis



---HBV

Parkinsonism essential features: TRAPS

Tremor (resting tremor)

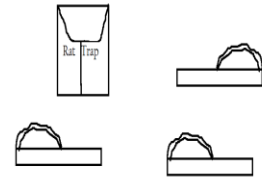
Rigidity

Akinesia

Postural changes (stooped)

Stare (serpentine stare)

· To remember what kind of tremor and postural change, can look at letter that follows in TRAPS: Tremor is Resting, Posture is Stooped.



Parkinsonism drugs: SALAD

Selegiline

Anticholinergics (trihexyphenidyl, benzhexol, ophenadrine)

L-Dopa + peripheral decarboxylase inhibitor (carbidopa, benserazide)

Amantadine

Dopamine postsynaptic receptor agonists (bromocriptine, lisuride, pergolide)



---Dr. Harsh Sharma

Thickened nerves causes: HANDS

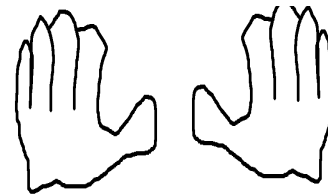
Hansen's (leprosy)

Amyloidosis

Neurofibromatosis

Diabetes mellitus

Sarcoidosis



---Dr. Harsh Sharma

Migraine Headache, Precipitating Factors:

C⁶

Cino (ie, wine)

Cheese

Chocolate

Citrus fruits

Coronary vasodilator (ie, nitrates)

Contraceptive pill

Stroke, Etiology:

L²A²

Lacunar (seen in basal ganglia and brain stem)

Large-artery disease (eg, Takayasu's arteritis, syphilis)

Atherosclerotic (ie, carotid artery-to-cerebral artery embolism)

Cargiogenic (eg, atheroma, bacterial vegetations in endocarditis)

Coagulable (ie, hypercoagulable) states

NEUROSURGERY

Scalp Layers: SCALP

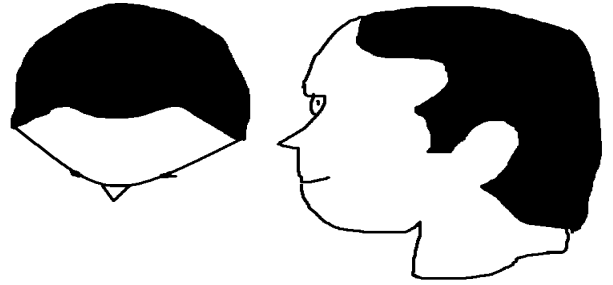
Skin

Connective tissue

Aponeurosis of Galen

Loose connective tissue

Pericranial tissue



Cervical Spine X-ray, Interpretation: ABCS

Alignment of: soft tissue, vertebral bodies anteriorly, facet joints, spinous processes

Bone fractures

Cartilage: intervertebral disc spaces should be equal

Soft tissues: prevertebral and retropharyngeal spaces are increased with bony injury, blood or air from tracheal injury

Hydrocephalus in Infants and Children, Causes: MHO

Meningitis (infectious)

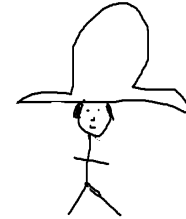
Hemorrhage (periventricular hemorrhage)

Obstruction (eg, aqueduct stenosis, tumor)

OBSTETRICS

Biophysical Profile (Ultrasound of Fetal Behaviour), Scoring Criteria: MR HAT

Movement of fetus
Respirations (ie, fetal breathing)
Heart rate of fetus (ie, Non-Stress Test)
Amniotic fluid volume
Tone of fetus
Maximum score of 10; each criterion is scored as a 0 or 2



Multiple Gestation (eg, Twins, Triplets), Complications: TIP^7

Transfusion from twin to twin
Intrauterine Growth Restriction
Placenta previa
Polyhydramnios
Post-partum hemorrhage
Presentation (ie, malpresentation)
Pre-eclampsia
Premature rupture of membranes
Premature labour

Fancy Restaurant	
Drink	1.99
Salad	4.99
Entree	22.99
Total	30.00
TIP x7	_____
Signature	_____

Pre-Eclampsia, Clinical Features: HELP

Hypertension
Edema
Late in pregnancy
Proteinuria
Primigravida (more common)
Note: Do not confuse this mnemonic with the HELLP syndrome, which is a variant of pre-eclampsia



Breech Presentation, Causes: P^7

Prematurity
Parity (ie, grand multiparity)
Pregnancy (ie, multiple pregnancy)
Pelvis (ie, contracted pelvis)
Polyhydramnios
Placenta previa
Pelvic tumours (eg, uterine leiomyoma)

Diabetes Mellitus (Gestational), Fetal and Delivery Complications: SLIM PUSH^3

Stillbirth
Lung immaturity
Intrauterine growth restriction
Macrosomia

Prematurity
Underdevelopment (ie, sacral agenesis, ventricular septal defect, neural tube defect, cerebral palsy)
Shoulder dystocia
Hypoglycemia, Hypocalcemia, Hyperbilirubinemia

Dystocia (ie, Abnormal Labour), Causes: Power, Passenger, Passage

Power(ie, poor or uncoordinated uterine contractions)

Passenger(ie, fetus too large or malpresentation)

Passage (ie, pelvis too small or unusual shape)

Ectopic Pregnancy, Risk Factors: The Five "-ees

Ectopy(ie, previous ectopic pregnancy)

PID(ie, pelvic inflammatory disease)

IUD(ie, intrauterine device)

Surgery (ie, previous lower abdominal surgery)

Endometri (ie, endometriosis)

HELLP Syndrome (a severe variant of pre-eclampsia)

Hemolysis

Elevated Liver enzymes

Low Platelets

Forceps Delivery, Indications: D³

Delay in second stage of labour

Distressed fetus

Distressed mother

Forceps Delivery, Prerequisites for: ABCDE

Analgesia is adequate

Bladder empty

Cervix is dilated

Descent past ischial spines

Ead (ie, head) presentation

Polyhydramnios, Complications: P⁴

Prolapse of umbilical cord

Placental abruption

Preterm labour

Presentation (ie, malpresentation)

Postpartum Pyrexia, Causes According to Temporal Sequence:

Wind(ie, lung atelectasis)

Water ie, urinary tract infection)

Womb(ie, endomyometritis)

Wow (ie, mastitis)

Wind (ie, pneumonia)

Wound (ie, C-section or episiotomy site)

Walk (ie, deep venous thrombosis)

Pre-eclampsia, Associated Risk Factors: MAD PRIMIGRAVIDA

Multiple gestation

Age extremes (mother is younger or older)

Diabetes mellitus

Primigravida

Renal disease

Intrauterine growth restriction

Mole (ie, hydatidiform mole)

Increased blood pressure (ie, chronic hypertension)

ONCOLOGY

Bone Metastases, Common Causes of: Mom, Buy The Kid Long Pants!

Malignant melanoma

Breast

Thyroid

Kidney

Lung

Pants



OPHTHAMOLOGY

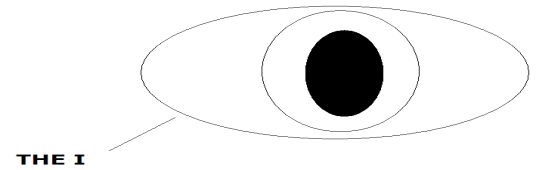
Proptosis, Causes: THE I

Tumour (eg, retinoblastoma)

Hemorrhage (eg, traumatic posterior orbital hematoma)

Endocrinopathy (eg, Graves' disease)

Infection (eg, orbital cellulitis)



Pupillary dilatation (persistent) causes: 3AM

3rd nerve palsy

Anti-muscarinic eye drops (eg to facilitate fundoscopy)

Myotonic pupil (Holmes Adie pupil): most commonly in young women, with absent/delayed reaction to light and convergence, and of no pathological significance.

---Gajan Rajeswaran Final Year Medical Student, Imperial College School Of Medicine, London

Innervation of the Extraocular Muscles: LR^SO4

All extraocular muscles are innervated by the third cranial nerve except the **Lateral Rectus** by the 6th cranial nerve and the **Superior Oblique** by the 4th cranial nerve

Myopia, Clinical Characteristics: LM^2N

Long eyeball is ...

Myopic, requiring ...

Minus diopter lens for correction, and the patient is ...

Nearsighted

ORTHOPEDICS

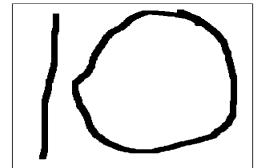
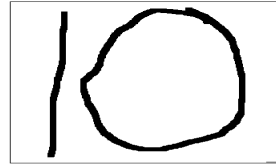
Carpal Tunnel Syndrome Causes: TENS

Trauma (eg, Colles' fracture, daily overuse at typing keyboard)

Endocrinopathy (ie, pregnancy, hypothyroidism, diabetes mellitus, acromegaly)

Neurological (C5-C6 disk herniation can mimic a CTS)

Synovitis (eg, rheumatoid arthritis)



Colles' Fracture, Casting Position: PUP

Flexion (ie, wrist flexion) +

Ulnar deviation of wrist +

Pronation of wrist

Note: Keep on cast for six weeks

Compartment Syndrome (Ischemic Injury), Signs: P⁶

Passive stretching causes severe pain (most reliable sign)

Pain

Pallor

Paresthesiae

Poor capillary refill

Pulselessness (late sign)

Epiphyseal Injury, Salter-Harris Classification: SALTER

Type I: Straight through the epiphyseal growth plate

Type II: Above the epiphyseal growth plate (ie, in a fragment of metaphysis attached to the epiphysis)

Type III: Lower (ie, through and below the epiphyseal growth plate)

Type IV: Through the epiphysis and metaphysis

Type V: Emergency (ie, crush of the epiphyseal growth plate)

Scoliosis, Neuromuscular Causes: M⁴AC

Muscular dystrophy

Muscular atrophy (i.e., spinal muscle atrophy)

Myelodysplasia

Mocutaneous syndromes (e.g., neurofibromatosis)

Arthrogryposis multiplex congenita

Cerebral palsy

Shoulder Dislocation Posteriorly, Causes: 3 E's

Epileptic seizure

Ethanol intoxication

Electrical injury (eg, electrocution, electroconvulsive therapy)

Note: A posterior shoulder dislocation is rare, but often missed

OTOLARYNGOLOGY

Otalgia (Earache), Causes of Referred Pain: 10 T's

Teeth

Temporomandibular joint syndrome

Trismus

Trachea

Tube (ie, eustachian tube)

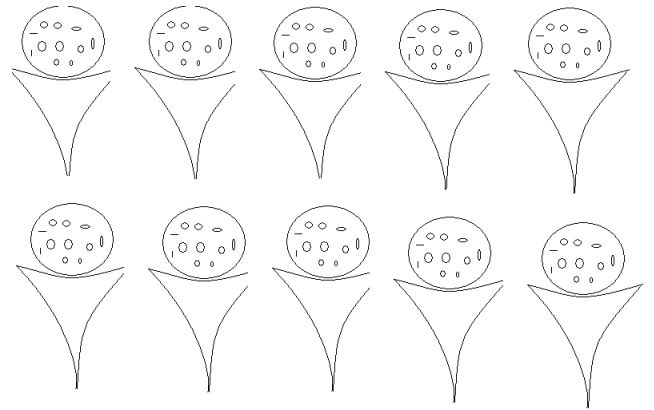
Tic douloureux (ie, trigeminal neuralgia)

Tonsilar (ie, tonsillitis, cancer)

Tongue

Throat (laryngeal carcinoma)

Thyroiditis



PATIENT HISTORY AND EXAMINATION

Patient examination organization SOAP:

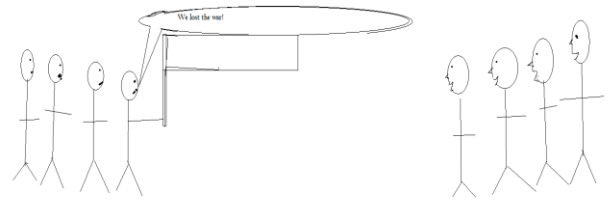
- Subjective: what the patient says.
- Objective: what the examiner observes.
- Assessment: what the examiner thinks is going on.
- Plan: what they intend to do about it.



---Richard Rathe

Pain history checklist LOST WAR:

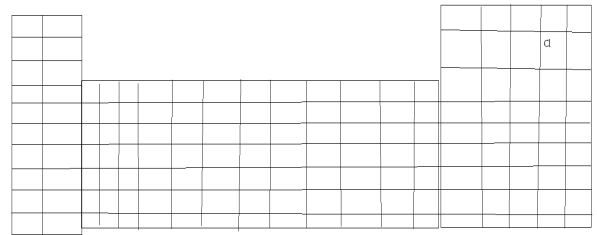
- Location
- Onset
- Severity
- Time
- Worsening factors
- Alleviating factors
- Radiation



---Jane Day

Pain history checklist CHLORIDE:

- CHaracter (stabbing, throbbing, etc.)
- Location
- Onset
- Radiation
- Intensity
- Duration
- Exacerbating and alleviating factors



Patient profile (PP) LADDERS:

- Living situation/ Lifestyle
- Anxiety
- Depression
- Daily activities (describe a typical day)
- Environmental risks/ Exposure
- Relationships
- Support system/ Stress



---Michael Waddell

Unconsciousness: differential FISH SHAPED:

Fainted

Illness/ Infantile febrile convulsions

Shock

Head injuries

Stroke (CVE)

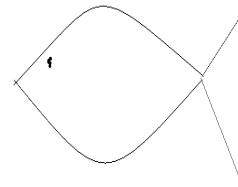
Heart problems

Asphxia

Poisons

Epilepsy

Diabetes



PEDIATRICS AND NEONATOLOGY

Cerebral Palsy, Criteria for Diagnosis: **POSTER**

Posturing (especially abnormal extensor thrusting)

Oropharyngeal problems (tongue thrusts, grimacing, W swallowing difficulties)

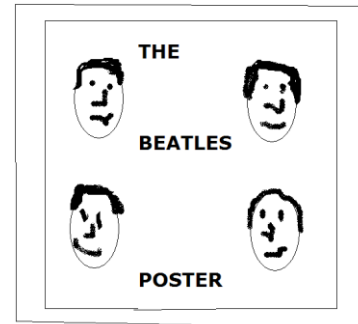
Strabismus

Tone increased or decreased in muscles

Evolutional responses (ie, persistent primitive reflexes or failure to develop equilibrium and protective responses)

Reflexes (ie, deep tendon reflexes are increased and plantar reflexes are up going).

In order to diagnose CP require four criteria in a child older than one year who has no evidence of a progressive disease by history



Constipation in Childhood, Organic Causes: **H³AND**

Hirschprung's disease, Hypothyroidism, Hypercalcemia

Anal fissure

Neurogenic bowel (eg, spina bifida)

Diabetes mellitus



Failure to Thrive, Causes: **The Seven C's**

Congenital abnormalities (eg, ventricular septal defect)

Chromosomal abnormalities (eg, Down's syndrome)

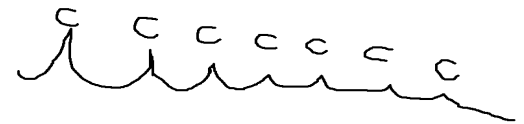
Cystic fibrosis

Celiac disease

Cow's milk protein intolerance (allergy)

Calorie-protein malnutrition

Cruelty (eg, parental neglect, abuse, environmental deprivation)



Henoch-Schonlein Purpura, Symptoms and Signs: **RASHH**

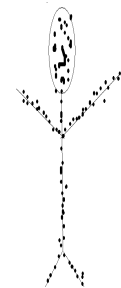
Rash (ie, purpuric rash over buttocks, extensor surfaces of legs, pre-tibial region)

Arthralgia

Sore abdomen

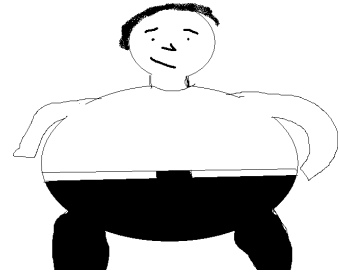
Hematuria

Hematochezia



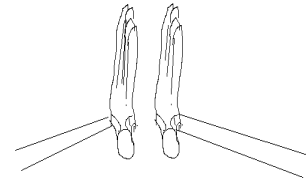
Obesity in Childhood, Complications: FATSO

- Furunculosis
- Acanthosis nigricans
- Triad (1. diabetes mellitus, 2. atherosclerosis, 3. hypertension)
- Slipped femoral capital epiphysis
- Obesity in adulthood



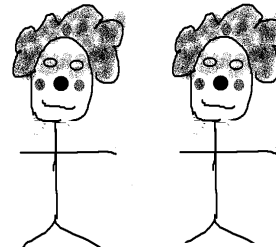
Seizures in the Neonate, Causes: H^5I temp

- Hypoxia
- Hypoglycemia
- Hypocalcemia
- Hypomagnesemia
- Hemorrhage (ie, periventricular, subarachnoid, subdural)
- Infection (ie, fever, meningitis, TORCH organisms)



Turner syndrome components: CLOWNS

- Cardiac abnormalities (specifically Coartication)
- Lymphoedema
- Ovaries underdeveloped (causing sterility, amenorrhea)
- Webbed neck
- Nipples widely spaced
- Short



---Robert O'Connor

Kwashiorkor distinguishing from Marasmus: FLAME

- Fatty Liver
- Anemia
- Malabsorption
- Edema

---Chris



APGAR score components: SHIRT

- Skin color: blue or pink
- Heart rate: below 100 or over 100
- Irritability (response to stimulation): none, grimace or cry
- Respirations: irregular or good
- Tone (muscle): some flexion or active

---Kimberly Scott



Potter syndrome features: POTTER

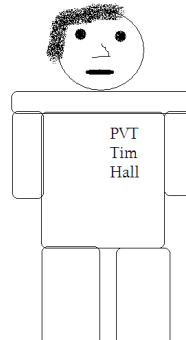
- Pulmonary hypoplasia
- Oligohydrominios
- Twisted skin (wrinkly skin)
- Twisted face (Potter facies)
- Extremities defects
- Renal agenesis (bilateral)



---Dr. Atif Farooq Khawaja Rawalpindi

PriVaTe TIM HALL

- Phenylalanine
- Valine
- Threonine
- Tryprophan
- Isoleucine
- Methionine
- Histidine
- Arginine
- Leucine
- Lysine



Croup Scoring: Remain Calm Coughing Makes Stridor Appear

- Remain** = Retractions (none --> intercostal & nasal flaring)
 - Calm** = Colour (normal --> central cyanosis)
 - Coughing** = Cough (none --> paroxysmal "bark")
 - Makes** = Mental status (alert --> restless --> delirious)
 - Stridor** = Stridor (none --> stethoscope --> without stethoscope)
 - Appear** = Air entry (normal --> decreased --> delayed or minimal)
- Based upon: Webb 1990.

Developmental Milestones, Pull-To-Sit Response in the Infant

- At two months the head lags behind the trunk
- At four months the head is kept in alignment with the body
- At six months the head leads before the body

Developmental Milestones, Rolling and Sitting

- Roll** at four months (there are four letters in the word "ROLL")
- Sits** at Six months (sounds the same)

Developmental Milestones, Vision

20/20 visual acuity is developed by **20** months of age

Epiglottitis, Symptoms and Signs: 5 D's

Distressed
Drooling
Dysphagia
Dysphonia
Dyspnea

Sexual Development in the Female, Stages of: ABCDE

Accelerated growth (ie, height)
Breast development
Cunnus (vaginal) hair
Distal hair growth (ie, axillae)
Endometrial sloughing (ie, menarche)

Seriously Ill Pediatric Patient, Recognition: SAVE A CHILD

Skin (mottled, cyanotic, petechiae, pallor)
Activity (needs assistance, not ambulating, responsive)
Ventilation (intercostal retractions, drooling, nasal flaring, respiratory rate, stridor, wheezing)
Eye contact (glassy stare, fails to engage examiner)

Abuse (unexplained bruising/injuries, inappropriate parent)

Cry (high-pitched, cephalic, irritable)
Heat (high fever > 41 deg C, hypothermia < 36 deg C)
Immune system (AIDS, corticosteroids, asplenic, sickle cell)
Level of consciousness (irritable, lethargic, convulsions, unresponsive)
Dehydration (% of total weight lost with 1 mL = 1 g, capillary refill, fontanelle, mucous membranes, cold hands/feet, voiding, diarrhea, vomiting)
SAVE: Observations made prior to touching the child
CHILD: History from caretaker & brief exam

Based upon: Aloha Chapter Hawaii Emergency Nurses Association 1991.

PHARMACOLOGY

Metabolism enzyme inducers

"Randy's Black Car Goes Putt Putt and Smokes":

Rifampin
Barbiturates
Carbamazepine
Grisoefulvin
Phenytoin
Phenobarb
Smoking cigarettes



---Brad

Nicotinic effects: MTWTF (days of week):

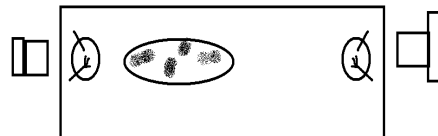
Mydriasis/ Muscle cramps
Tachycardia
Weakness
Twitching
Hypertension/ Hyperglycemia
Fasciculation

November						
M	T	W	T	F		

---John Nguyen

Direct sympathomimetic catecholamines: DINED

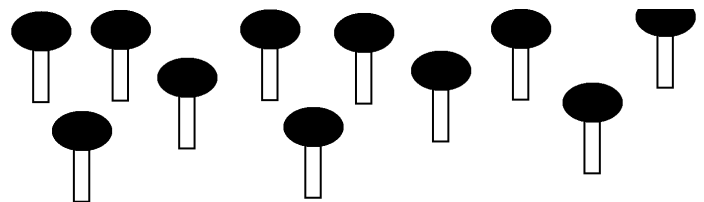
Dopamine
Isoproterenol
Norepinephrine
Epinephrine
Dobutamine



---Robert O'Connor

ACE Inhibitor contraindications: PARK

Pregnancy
Allergy
Renal artery stenosis
K increase (hyperkalemia)



---Anthony Chan

PLASTIC SURGERY

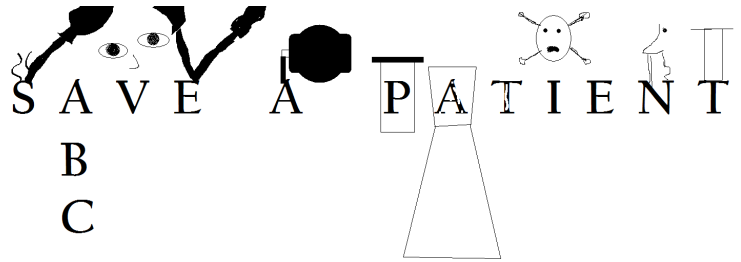
Burns, initial resuscitation: SAVE A PATIENT

Stop the burning process
ABCs of basic life support
Visualize the patient for all injuries
Estimate burn size and begin fluid resuscitation

Airway (intubate if inhalation injury present)

Penicillin (i.e., start antibiotics)
Analgesic
Topical therapy (e.g., flumazanine cream)
Intoxicants/Inhalants
Nasogastric tube
Tetanus toxoid

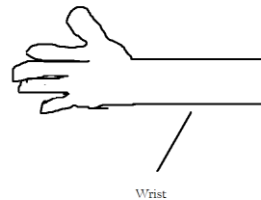
(Source: Williams and Porvaznik 1989)



Carpal tunnel syndrome treatment: WRIST

Wear splints at night
Rest
Inject steroid
Surgical decompression
Take diuretics

---Sushant Varma



Burn Size Estimation by Total Body Surface Area: Rule of 9's

Entire Head: 9%
Entire trunk: 18% + 18% = 36%
Entire arm: 9%
Entire leg: 18%
Whole body: 100%

PSYCHIATRY

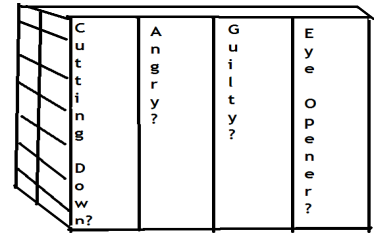
Alcoholism Screening Questions: CAGE

Have you ever tried to **C**ut down on your drinking?

Do people ever **A**nger you about your drinking?

Do you ever feel **G**uilty about your drinking?

Do you ever require an **E**ye opener (ie, drink of alcohol) to get going in the morning?



Anticholinergic Drug Side Effects: ION⁺

Confusion

Blurred vision

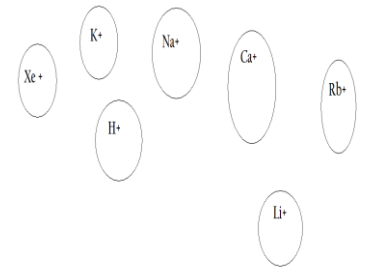
Reduced lacrimation

Reduced salivation

Heart acceleration (tachycardia)

Urinary retention

Constipation

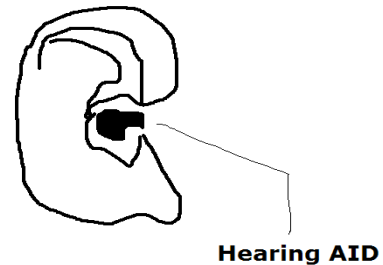


Delirium, Signs: AIDS

1. Acute onset, then fluctuation over days
2. Inattentiveness (especially to conversation)
3. Disorganized thinking (ie, incoherent speech)
4. State of consciousness either reduced or hypervigilant

For diagnosis of delirium need both 1 and 2 + either 3 or 4 (sensitivity 94-100%, specificity 90-95%)

(Source: Hospital Practice, April 30, 1991)



Depression, Symptoms and Signs: ASSESS PAT

Appetite diminished +/- weight loss

Sleep disturbance (especially diminished number of sleep hours)

Sexual libido diminished

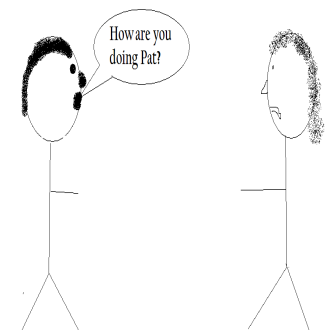
Energy diminished

Suicidality Self-worthlessness and guilt

Psychomotor agitation

Anhedonia

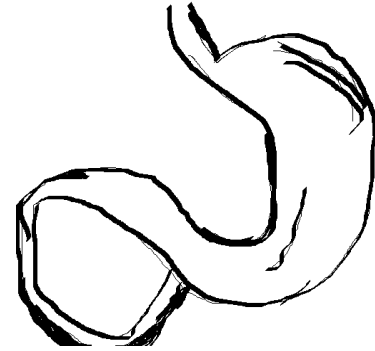
Thought process impaired



Generalized Anxiety Disorder, Symptoms: STOMACH

- Scanning and vigilance
- Two or more worries
- Organic causes should be ruled out
- Motor tension
- Anxiety unrelated
- Course of mood or psychotic should be ruled out
- Hyperactive autonomic

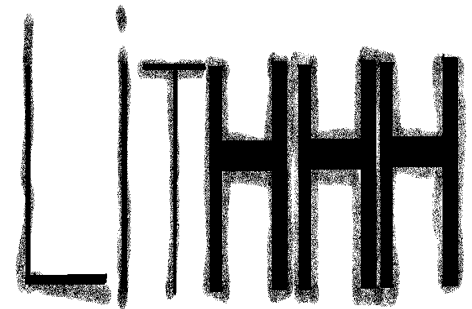
(Source: Short, Workman, Morse, Tuner. 1992)



Lithium, Side Effects: VANISH LITH^3

- Vertigo
- Ataxia
- Nystagmus
- Intention tremor
- Stupor
- Hperreflexia

- Leukocytosis
- Insipidus (ie, nephrogenic diabetes insipidus)
- T-wave inversion on the electrocardiogram
- Heaviness (ie, weight gain), Hypothyroidism, Hyperparathyroidism



Mania, Symptoms: GREAT SAD

- Grandiosity
- Racing thoughts
- Euphoria
- Activities, goal-directed
- Talkative

- Sleep deprived
- Activities, reckless
- Disracticibility

(Source: Short, Workman, Morse, Turner. 1992)



Mental Status Examination: COMO ESTAS

Cognitive function (calculation, concentration, insight, judgment)

Overview (appearance, attitude, level of consciousness, movements)

Memory (recent and remote)

Orientation (to person, place & time)

Emotion (affect & mood)

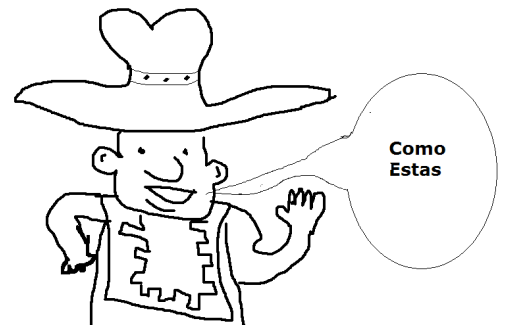
Speech (fluency, form, & comprehension)

Thought (process, content, & perceptual disturbances)

Attention (abstract thinking, recall, and intelligence)

Something else (that might be important to the patient)

(Source: Astrachan 1991)



Post-Traumatic Stress Disorder, Symptoms: IRAN

Insomnia and nightmares

Re-experiences of traumatic event at a later date

Arousal is increased

Numbing of general responsiveness to the real world



Suicide, Risk Factors: SAD

Schizophrenia

Alcohol abuse

Depression



Scale: SAD PERSONS

Sex: male
Above 40 years of age
Depression
Previous suicide attempt
Ethanol abuse
Rational thinking lost
Support systems lost
Organized suicide plan
No spouse
Sickness (physical illness)



If score 0-2: send home with friend or family
If 3-4: arrange close follow-up or consider short admission
If 5-6: strongly consider hospitalization
If 7-10: hospitalize and watch closely

Nervous stimulus: the 4 ways to classify "A MILD stimulus":

Modality
Intensity
Location
Duration

---Robert O'Connor

Depression: 5 drugs causing it PROMS

Propranolol
Reserpine
Oral contraceptives
Methyldopa
Steroids

---Sunu George

Dementia, Alzheimer's, Differential Diagnosis: DEMENTIAS

Drugs
Encephalitis
Metabolic (eg, electrolyte or liver abnormality, dehydration, acute intermittent porphyria)
Endocrine (thyroid disease, diabetes mellitus)
Normal-pressure hydrocephalus
Trauma (eg, chronic subdural hematoma)
Infection (eg, of lung or urine, AIDS, syphilis)
Affective disorder (ie, depression manifesting as pseudodementia)
Structural defect of brain (eg, infarction, tumour, abscess)

Dementia Patient, Management: FICS'MA

Family answering questions, referral to services and resources, treatment of behavioral disturbances, helping with placement, postmortem investigation and support

Intellectual status: observing for/treating delirium, depression, drug side effects Incontinence: initiating discussion

Clinical investigation, retraining regimens

Sleep: counselling family regarding expected disorders, ruling out environmental and physical causes, treating insomnia

Mobility/Activity: investigating causes of immobility, adjusting environment and drugs, restricting wandering

(Source: Jarvik and Wiseman 1991)

Tricyclic Antidepressants, Side Effects: A^4

Anticholinergic (see above for Anticholinergic Drug Side Effects)

Antihistaminic (eg, sedation, weight gain)

Ani-alpha 1 adrenergic (eg, orthostatic hypotension)

Arrhythmogenic (eg, quinidine-like ventricular cardiac effects)

REHABILITATION MEDICINE

Activities of Daily Living, Assessment: BATTED

Bathing
Ambulation
Transfers
Toileting
Eating
Dressing

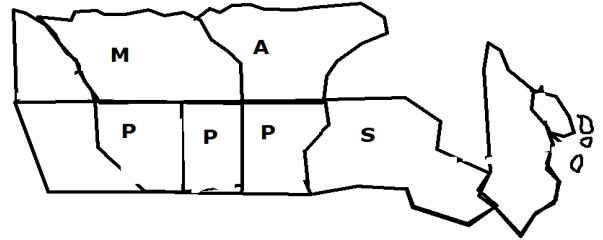


(Source: Brummel-Smith 1995)

RESPIROLOGY

Dyspnea of Sudden-Onset, Causes: M¹A²P⁵S¹

Mucous plug
Asthma,
Aspiration, RDS
Pulmonary embolus,
Pneumonia,
Pneumothorax,
Pulmonary edema,
Psychogenic
Sepsis

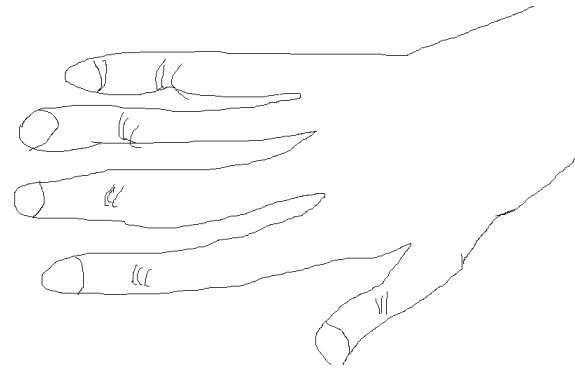


Digital (Finger) Clubbing, Causes: FINGER Clubb

Fibroses of lung
Infections (e.g., lung abscess, bronchiectasis, infective endocarditis)
Neoplastic (e.g., lung adenocarcinoma)
Gastrointestinal (e.g., chronic liver disease, inflammatory bowel disease, celiac disease)
Endocrine (e.g., hyperthyroidism)
Renal disease (chronic)

Cardiac (i.e., cyanotic congenital cardiac disease)

I
u
b
b



Cough (chronic): differential

When cough in nursery, rock the "CRADLE"

Cystic fibrosis

Rings, slings, and airway things (tracheal rings)/ Respiratory infections

Aspiration (swallowing dysfunction, TE fistula, gastroesophageal reflux)

Dyskinetic cilia

Lung, airway, and vascular malformations (tracheomalacia, vocal cord dysfunction)

Edema (heart failure)



---Vince Yamashiroya

RHEUMATOLOGY

Arthritis, Classification: i heart MEDICS



Metabolic (ie, gout, pseudogout, hemochromatosis)

Endocrine (ie, acromegaly)

Degenerative (ie, osteoarthritis)

Infectious (ie, septic joint, infectious synovitis, rheumatic fever)

Connective tissue disorders (rheumatoid factor-positive)

(i.e, systemic lupus erythematosus, rheumatoid arthritis, progressive systemic sclerosis/scleroderma, polymyositis/dermatomyositis)

Inflammatory vasculitides (ie, polyarteritis nodosa, Wegener's granulomatosis, hypersensitivity vasculitis, giant cell arteritis)

Seronegative spondyloarthropathies (rheumatoid factor-negative) (ie, ankylosing spondylitis, Reiter's syndrome, psoriatic arthritis, inflammatory bowel disease)

Joint pain causes: SOFTER TISSUE

Sepsis

Osteoarthritis

Fractures

Tendon/muscle

Epiphyseal

Referred

Tumor

Ischaemia

Seropositive arthritides

Seronegative arthritides

Urate

Extra-articular rheumatism (such as polymyalgia)



Which is the softer tissue?



Arthritis seronegative spondyloarthropathies: PEAR

Psoriatic arthritis

Enteropathic arthritis

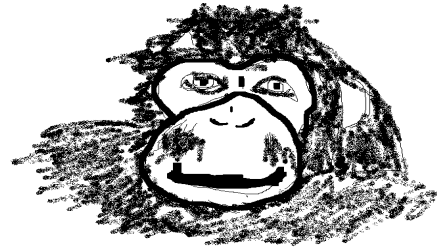
Ankylosing spondylitis

Reiter's/ Reactive

---Dave Hassan

Lupus, Drug-Induced Causes: CHIMP

Chlorpromazine
Hydralazine
Isoniazid
Methyldopa
Procainamide



Osteoarthritis, Radiological Features: OS^3teo

Osteophytes
Subchondral sclerosis
Subchondral cysts
Space between joint diminished

t
e
o

Operating
System

windows xp
mac os x
linux

Synovial Fluid Analysis, Three Necessary Tests: Three C's

Cell count and differential
Crystal examination
Culture and Gram's stain



Systemic Lupus Erythematosus (SLE), Eleven Diagnostic Criteria: PRUNE RASH

1. Photosensitivity
2. and 3. Rashes (ie, 2. Discoid rash; 3. Malar rash)
4. Ulcers in mouth
5. Neurologic (ie, seizures, psychosis)
6. and 7. Elevated blood tests (ie, 6. raised antinuclear antibody; 7. positive SLE cells seen, positive anti-double-stranded DNA antibody, positive anti-smooth muscle antibody, false-positive VDRL test)
8. Renal (ie, proteinuria, hematuria, cellular casts)
9. Arthritis (non-erosive)
10. Serositis (ie, pleuritis, pericarditis, peritonitis)
11. Hematologic (ie, hemolytic anemia, leukopenia, thrombocytopenia)



Note: Need 4 of 11 criteria for diagnosis of SLE

HLA-B27 associated diseases:

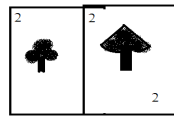
PAIR

Psoriasis

Ankylosing spondylitis

Inflammatory bowel disease

Reiter's syndrome



--- Atif Farooq Khawaja Rawalpindi Medical College

UROLOGY

Incontinence, Causes of Transient Form: DIAPERS

Delirium
Infection of urinary tract
Atrophic urethritis
Pharmacologic agents
Endocrine (e.g., glycosuria)
Restricted mobility ("geographic incontinence" of new setting)
Stool impaction

(Based upon: Resnick 1990)



Urinary incontinence: causes of acute and reversible: DRIP

Delirium
Restricted mobility/ Retention
Inflammation / Infection/ Impaction [fecal]
Pharmaceuticals / Polyuria
"Drip" is convenient since it is urinary incontinence, so urine only drips out.

Epididymitis bacterial causes: CENT

Chlamydia trachomatis
E. coli
Nisseria gonorrhoeae
Tuberculos bacteria

---Dr. Atif Farooq Khawaja Rawalpindi

Dialysis indications: AEIOU

Acid-base problems (severe acidosis or alkalosis)
Electrolyte problems (hyperkalemia)
Intoxications
Overload, fluid
Uremic symptoms

---Malvinder S. Parmar,

Enlarged kidneys causes: SHAPE

Scleroderma
HIV nephropathy
Amyloidosis
Polycystic kidney disease
Endocrinopathy (diabetes)

---Dino Santoro

Impotence causes

PLANE

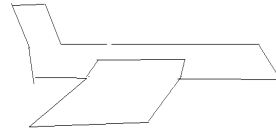
Psychogetic: performance anxiety

Libido: decreased with androgen deficiency, drugs

Autonomic neuropathy: impede blood flow redirection

Nitric oxide deficiency: impaired synthesis, decreased blood pressure

Erectile reserve: can't maintain an erection



---Ben Beckwith

Penile Pain, Differential Diagnosis: P^8

Priapism

Phimosiis

Paraphimosis

Peyronie's disease

Penile tumour

Purulence (ie, venereal disease)

Prostatitis

Push (ie, coitus-related trauma/overuse)